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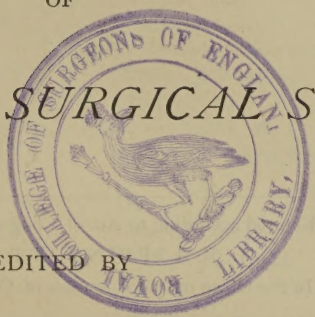

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FRANK WOODBURY, M.D.

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ORIGINAL LECTURES.

CLINICAL LECTURE ON SOME CASES OF ABDOMINAL DISEASE IN WOMEN.

BY MR. LAWSON TAIT.

(Reported for the *Philadelphia Medical Times*.*)

AT the Hospital of the Jefferson Medical College, on September 15, the day of the opening of the preliminary course of lectures, a large company of physicians and students were present, by invitation, to attend a clinical lecture by Mr. Lawson Tait, of Birmingham, England.

Professor Parvin introduced the lecturer in a few words, as one who needed no introduction to the most of those present.

Mr. Tait said:

I really do not know what Dr. Parvin has brought me here for, unless in his desire to show me attention he wishes to overwhelm me with kindness. I know that this is a tendency you have here, to overwhelm visitors with kindness, as it is sometimes in my own country. I have been told constantly since my arrival that I am in the country of big things; and now I find myself in the city of biggest things. I was, this morning, in the biggest store I ever saw, and to-day I ate the biggest oyster I ever ate in my life, and now I am in the biggest amphitheatre of any medical college anywhere. I know that we have nothing like it in England.

Now I am asked to do the biggest thing of all, and to lecture to you upon cases that I never saw until a few minutes ago, and examined only for about ten seconds each. Under these circumstances it is not unlikely that I may make some mistakes, and make a diagnosis which is incorrect; but if I do so I must ask you to pardon me, not because I am often given to making mistakes of this sort,—I hope I am not,—but because since I have been here I have been taken somewhat with the American disease, and am too much disposed to "hurry things."

Before bringing the cases before you, let me say a word upon the diagnosis of abdominal affections. It has been said that the most difficult thing in the world is a diagnosis in the belly. I am in the habit of illustrating this in a familiar way, in this manner: here is a table; it has a table-cloth on it. Now, I know that this is a table and table-cloth, but it is impossible for me to say what kind of wood is in the table until the cloth is removed. Just so is it with abdominal growths.

Now, it is just in this character of disorder that hurry is most likely to cause mistakes of a serious character. In no other department is a careful diagnosis more needed than in abdominal surgery; for you proceed immediately to perform an operation for its relief, and you are sure to be found out if you make a mistake.

A distinguished American physician told me the other day—and I shall not forget it—that a doctor may tell his patient that he has dulness here or râles there, and the patient moves off, and no one can tell whether he was right or not; but in abdominal surgery if we make a mistake we proceed to act at once upon the diagnosis by opening the abdomen. Therefore, on account of the obscurity of the case and the serious consequences of a mistake, you should act with the more caution in making up your opinion.

In proceeding to examine the patients brought before you, I will ask again that you bear in mind the necessity of careful and thorough investigation of the cases, and that, in consequence of my lack of opportunity to do this, I may make some mistakes: if I do so, and, upon subsequent examination, Dr. Parvin finds reason to correct any diagnosis that I may make this afternoon, you must pardon it.

REMARKS ON OVARIAN TUMOR, AND EARLY OPERATIONS FOR ITS RELIEF.

The patient who has just been brought in is suffering with a disease which is a very common one with us, and also, I have no doubt, quite common with you: it is said to be a case of ovarian tumor by those who have had her under their care.

Upon exposing the prominent abdomen and inspecting its surface, the first thing that strikes my eye is the scar of a puncture near the navel and on a level with it, and a second one a little lower down. These are the marks of two tappings of the abdomen, which were not ordered by any one here. Upon this I will speak further in a few minutes.

* Corrected by the author.

You notice that there is a symmetrical uniformity about this abdomen. Now, whenever you see a symmetrical enlargement of the abdomen, you should suspect that it is not due to an ovarian tumor. It is likely to be one of three things: (1) pregnancy, which you must always eliminate; (2) a small tumor, or malignant growth in the abdomen, accompanied by effusion of ascitic fluid; and (3) a parovarian tumor.

Let me give you a word of caution just here: when you are dealing with the abdomen for purposes of diagnosis, you can never be too delicate with your manipulations. If you handle the patient too roughly, you will frighten her, she will contract her muscles, and you will not learn a great many things which it is advisable that you should learn. If you handle patients roughly in operations, there is also danger that you may do them some harm.

I have now learned, by passing my hands gently over the abdomen in this case, several things. In the first place, the case is not one of pregnancy, although of this I had satisfied myself before; secondly, it is not a parovarian tumor; and I have also learned that, in the third place, it is probably a small growth with a large ascitic effusion. Just at this place in the lower portion of the abdomen there is a small solid mass, and there is a larger one in the upper part which is not solid.

Now, my task shall be to find out what relation there is, if any, between the two masses. Here, in the epigastric region, I get a tympanitic, an intestinal, note upon percussion, and also a wave of fluctuation; low down it is dull. This was very useful to the man who tapped her, and upon it he probably based his diagnosis, and it would have given us considerably more information if the case had not been tapped; but now I am unable to say which of two conditions that may be present is before us, although it is important to know this, for upon it depends the advice we will give in the case. This softer portion may be an ovarian cyst which has partially collapsed after being emptied by tapping, or it may be an abdominal effusion. If it is the former, and an ordinary multicystic tumor, the treatment is perfectly easy and the result will be favorable; if, on the contrary, it is a small tumor surrounded by a large quantity of ascitic fluid, the state of the case is very much altered, and there are several things to be considered. I have found in the pelvis a small tumor over to the left, which may be the ovary in a state of incipient cystoma; it may be a papilloma, or it may be a malignant proliferation from some of the viscera. It is important to find out which of these it is. Now that we have fluid in the abdomen, it is impossible to come to a very definite conclusion, but could we have seen the patient before she was tapped, the relations of the intestines and the fluid would have aided the diagnosis. The growth may have been from a cyst of the ovary, but I think myself that the fluid was not removed from a cyst,—that it was ascitic; and it is probable that this tumor here is a papilloma. So far as I read the history, I think that the second is rather more likely.

Under these circumstances, what are you to do for such a patient? The first thing to do is to open the abdomen in either case. My experience teaches me that it is a surgical crime to allow a patient to go to her grave without an operation, where it offers a possibility of relief.

This leads me to speak of the condition of papilloma, which is generally regarded as most unfavorable. Now, on account of reasons which to you are evident, it is possible to speak more freely in the patient's absence than in her presence; and she will, therefore, be removed. I said that I would return to the subject of tapping. It is not at all an innocent operation, though it is not considered a misdeed to tap by many physicians. In my own country the practice of tapping still prevails, and, possibly, in this country: so I have not too much to say when a case is brought to me for operation after it has been tapped; but in my opinion there are very few cases in which it is justifiable to tap a patient; the only exception I would make would be in malignant disease. Let me say with regard to the effects of tapping upon the subsequent mortality after operation, that I have not lost a case after ovariotomy for several years, except those which had been previously tapped. It is perfectly positive that the greatest danger in a case does not come from adhesions, or such complications, but from tapping. No matter how difficult the case was, if it had not been tapped it did well. I think that the explanation is a chemical one. The fluids in the interior of cysts are very rich in some complex

kinds of albumen. I have made very many examinations of these fluids, testing them after various methods, and have come to the conclusion that no two kinds of cysts have fluids exactly alike. But all the cases I have lost were cases which had been previously tapped. I think that the reason for this lies in the physiological fact that the removal of this albuminous fluid renders the blood more coagulable. After the operation, the clot which forms in the pedicle runs backward in the vessels, and causes death from cardiac thrombosis.

My experience, therefore, makes me say that there should be no tapping. When a patient with an abdominal growth, ovarian or not, comes into the hands of a physician, his duty is either to remove the tumor without delay, if his experience and aptitude for operating are sufficient to undertake the case himself, or, if not, to hand it over to the care of one of his colleagues who has the skill and ability, for the credit of abdominal surgery, which both of them represent and desire to honor.

To return to our case: this patient has been tapped, and my impression is that the fluid was ascitic. The position of the punctures is above the line of the ordinary place for tapping ovarian cysts; the surgeon who did this tapping probably felt this comparatively solid tumor at the base, and believed himself more likely to reach fluid at this point than lower down, at the point of election. This, of course, is based upon the supposition that you are accustomed to follow the same rule that surgeons at home are, of tapping usually about half-way between the umbilicus and the pubes.

With regard to tapping, I rarely find myself called upon to perform tapping in preference to ovariotomy. I do not find the objection on the part of patients to operating that existed ten or twenty years ago, but I have not had a patient for the last five or six years who urged such objection or refused operation. When you can say positively, as you now may, that ninety-six per cent. of such operations should get well, you are not likely to meet with refusal. But, you may say, are there not cases which have been tapped many times without apparent injury?

I remember that I saw in the county of Hants a tombstone that bore an inscription declaring that the deceased had been tapped for ovarian dropsy forty-seven times. Being on a tombstone, of course it must be true: if so, this is the largest number of such tappings on record. My reply is that these large cysts are generally not ovarian but parovarian cysts; they are filled with a fluid of low density, which contains almost no albumen, and very little salts. Now, it is easy to conceive that in a single large cyst with a fluid which does not contain much albumen, the tumor may be tapped many times without weakening the patient very much; but in an ovarian cyst filled with albuminous fluid the result would be very different. This fact, then, would be no argument in favor of a change in treatment and a return to the practice of tapping ovarian cysts, a practice which is now less frequent in England than it used to be, chiefly through the efforts of my friend Dr. Bantock and myself.

An early operation is advisable. The patient is not subjected to the physical labor of carrying around a large growth, she is less likely to have papilloma, and, finally, if a young woman, she will be glad to be relieved of the annoyance, if not more, of exciting observation by her large abdomen. The surgeon will find an early operation desirable, because the tumor is small and more easily removed, he will be less likely to find adhesions, the operation will be more readily done, there are fewer chances of having recurrent attacks of inflammation or peritonitis afterwards, and, finally, the danger from early operations is almost *nil.* I have little hesitation in saying that, in a series of early operations, where there had been no tapping, the mortality would not be over one per cent. If you should hear the contrary opinion expressed with regard to tapping from that I have just given you, you will find generally that it is by a white-haired man, while you will hear the opinion that I have expressed from those whose hair is brown or just on the turn; that is, the younger men advocate this view, the older men condemn it. I do not mean to imply that young men are always right and that old men must be wrong. There is a proverb, "Young men think old men fools, but old men know that young men are fools." I mean simply to teach that science is constantly progressing from age to age, and that each age is something in advance of that which preceded it.

Perhaps I ought to say one word about this case in conclusion. Suppose that I be-

lieved that this patient was suffering from papilloma—the disease which we so much dread after opening the abdomen—developing around a tumor: I would still proceed to remove the tumor, even if I were certain that papilloma were present. And my reason for this is a very curious one. I cannot pretend to explain it, but the occurrence is one of which I am quite certain. I cannot say without my figures before me just how many times I have met with this condition, but it is certainly a hundred times. In operations especially, and in large proportion in ovarian tumors, also in cysts of the parovarium and in myoma, and sometimes when there was no tumor at all, when I opened the abdomen for exploratory purposes, without knowing what I would find, have I encountered this curious velvety condition of the peritoneum which I recognized as papilloma. I remember a case seen by Mr. Pemberton, my colleague at Birmingham. The patient, a young lady, had an enormously enlarged abdomen, due to ascites, a fact I had recognized. I opened it by incision, as my practice is to make a small incision for exploration and drainage; by this means the fluid is evacuated just as well as with the trocar; but you cannot feel anything with a trocar, but with a clean cut of two or three inches you can introduce one or two fingers, and find out the actual condition of the pelvic organs as you can in no other way. I may add that I always make the exploratory incision for the removal of fluid, and find that it readily heals. Now, in this case of which I am speaking, I opened the abdomen and I found the peritoneum universally covered with papilloma. I simply put in a drainage-tube and cured the patient. It is now four years since this was done, and the patient remains entirely well.

I recall another case which I operated upon several years ago. Papilloma was present, and I was obliged to leave two masses in the abdomen. She is now about sixty-five years of age, the tumors have entirely disappeared, and she is perfectly well.

I have, therefore, concluded that there are two kinds of papilloma, malignant and non-malignant: one kills the patient in a few weeks or months, and from the other the patient will recover after an operation. I have carefully taken specimens from each and subjected them to microscopical examination, and competent experts could find no difference whatever. The non-malignant cannot be distinguished from the other. There is no question but that there are certain cases, however, in which it is malignant, nor that in others it is perfectly curable. So that, even if I knew this to be a case of papilloma, I would open the abdomen, and, if possible, remove it, for it is possible that by the removal of the tumor I may cure the patient.

I said, "if possible," to remove the tumor. This reminds me that, after opening the abdomen, you must (let me use an American word here) "prospect" a little, and make up your mind fully what you shall do. The most fatal operations are those which have been abandoned after removal of a portion of the growth. If you remove part of the tumor and feel tired, and feel like closing the abdomen, remember that you are exposing your patient to a condition the mortality of which is about sixty per cent., but, if you have the courage to finish the operation, you may cure your patient.

In these cases, of course, skill in manipulation is necessary, and this will come by experience. If your experience and courage are not equal to the operation, place your patient in other hands, and the result will be a better one for your reputation and for the patient.

REMARKS UPON EXPLORATORY LAPAROTOMY AND REMOVAL OF THE UTERINE APPENDAGES.

The next case is one which involves considerable difficulty in diagnosis, and requires a knowledge of the past history of the patient in order properly to decide the question of treatment. This knowledge I have only very imperfectly obtained from my few moments' conversation with her, but I will take it for granted that the young girl's sufferings are real and intense as she states, and that everything has been done for her relief that could be done by medical means. Now, I might supplement this by giving you an account of a similar case which I operated upon the other day in the State of New York, where the history was better known to me than this one is, or I might cite some cases under my own care at home, which were treated by removal of the diseased uterine appendages; but I will not take up your time with such accounts, because I wish to discuss with you a few points in relation to the operation itself as compared with other means of treatment.

She is a young girl, 21 years of age, and has a pronounced crop of acne upon her face. When a woman comes into my consultation-room with a crop of acne, I always ask for a copy of the prescription that she has been taking, and I expect to find that it is bromide of potassium, which is the fashionable drug in the practice of some physicians for all the ills that women suffer from. I never met with anybody who could swear that he cured any woman with it, but it is a convenient pump-handle and appears to be diligently worked.

I usually am told, in answer to my questions as to previous treatment in these cases, "Oh, yes; I have taken lots of bromides. I went to Dr. A., Dr. B., Dr. C., Dr. D., Dr. E., and Dr. F., and Dr. A. gave me bromide of potassium, Dr. B. gave me bromide of sodium, Dr. C. gave me bromide of ammonium," and so on. The latest that I heard of was the bromide of nickel. Finally, she stumbles upon Dr. F., who puts in a pessary; for what, goodness knows, but he finds her ailing, and puts in a pessary, and the chances are that it does harm instead of good.

I removed a pair of Fallopian tubes crammed full of pus, just before I left England, from a woman who had spent eighteen months not in "riotous living," but in going round through a course of doctors. Another patient had a tray-full of pessaries, of various shapes and sizes. She would exhibit them as curiosities. "This one," she would say, taking one up in her fingers, "was inserted by Dr. A., and I wore it a week; Dr. B. introduced this one, and I could only wear it a few days; and this one must have been invented by the devil himself, for I could not wear it at all."

To return to our supposed case: she finally leaves the pessary-doctors, and the bromides, and goes to another, who dilates and splits the cervix uteri. So she goes from one quack to another, until she comes under the care of a surgeon who will operate and relieve her. I do not mean to declare that all women suffering with menstrual disorders require operation; by no means; although I have been misrepresented as saying this. I have never said it. But I mean to say that a large number of cases of these suffering women demand and require relief by operation; and of this class I believe that our patient here is one.

Now, if a woman with a history of wandering about for a considerable period among different physicians, seeking relief from menstrual disorders and finding none, who has used various contrivances without benefit, and taken many drugs, almost to the destruction of her health, comes to you, and you are persuaded from the account she gives of herself that her sufferings are real and not imaginary, you are justified in making a small incision in the abdomen and in putting your fingers down into the pelvis to find out if you can relieve her.

I have been accused of abusing this operation, but, I think, unjustly. Every new operation is liable to be abused, but increasing experience soon teaches its proper limits.

I said that before operating you should be satisfied that the patient's sufferings are real and not imaginary. How can we ascertain if the patient's sufferings are real? Now, in my experience, I have always found that if, after putting the operation conscientiously and fully before the patient, she consents to undergo it I have never operated without finding something the matter that would warrant the operation. You may say that this is placing too much responsibility upon the patient; but is it not what we have to do in other departments of surgery? A man comes with a chronic disease of the knee requiring operation,—amputation or excision. The surgeon explains the risks and advantages of each operation to the patient, and recommends one or the other, but the patient must take the responsibility of deciding. I always explain the operation carefully, and say that I will consult with her medical attendant or any number of them that she wishes, but the result of the consultation must be laid before the patient, and she must take a large share of the responsibility in the decision.

There are persons who have declared that this operation is done for low and immoral purposes. The first reply to this is that the operation is always done in such a public way as to refute any such charge. It cannot be done without being known: there are always nurses in attendance, who would tell of it, and it could not be kept secret. It is true, I have been approached by women who did not wish to bear any children; but we have some conscience left; and those who perform this operation are not to be considered as having less scruples than other surgeons. Moreover,

as I have just said, the operation is a semi-public one, and it would soon be known if it were done with such motives. So far as I know, it has never been openly and directly charged upon any one in England that an operation of this kind was done for immoral purposes.

It has also been said that the operation is done sometimes for another immoral purpose,—simply on account of the fee. But if this is brought to me, it might raise the same question with regard to the others who give bromides, put in pessaries, or divide the cervix. I think that the balance of the argument is in my favor: at all events, I have thrown down the gauntlet in England, and no one has yet taken it up.

Now, to return to this young girl. She is obliged to work for her living. Circumstances are very much against a patient who must earn her own living, as compared with one in comfortable circumstances in her own home. Luxury is much in favor of relief from ovarian disorders. A woman who can rest during her painful menstrual period is better situated for recovery than one who is obliged to work for one week in every month while suffering, and the latter requires relief by operation more decidedly than the former.

When a woman like this comes before you, who is compelled to work in order to live, and for one week in the month is incapacitated from working, you may be certain that stopping menstruation will give her relief, and you can do so just as truly as, in another patient whose eyes only see at twenty feet, you may by proper glasses enable him to see at a normal distance.

In this case, I have no doubt, if I could examine her, I would find her Fallopian tubes in a state of inflammation; but, even if they were found to be perfectly healthy, it would be better to remove them and stop this terrible suffering at each menstrual period.

About the consequences of the operation let me speak a word. I recall that a certain eminent ecclesiastic opposed the practice of vaccination and publicly stated in a sermon that dreadful things, such as a cloven hoof, and horns upon the head, would be caused by it. Now, it appears that we are treated in much the same way about this operation. We are told that the patients will get masculine, and that there will be an overgrowth of fatty tissue, and various other imaginary results. I am reminded, when I hear this, of the German professor who evolved a camel from his inner consciousness. It is well known, from the practice in Eastern countries of removing the testicles in men and ovaries from women, that, if the operation be done before puberty, the patient will retain to some extent the infantile type: the hair does not develop upon the face, nor does the voice change in men; but these consequences do not occur when the operation is performed after adult age has been reached. I have removed the ovaries in many cases and for various diseases, and I have never seen any of these asserted bad results, and no changes in the condition of the individual except for the better.

These ridiculous exaggerations I have referred to you will find in the first edition of Spencer Wells, and to my surprise I found them still more marked in the second edition: they are without any foundation in fact whatever. On the contrary, in the great majority of cases there is immediate relief from the sufferings and from loss of blood. Perhaps entire relief may be delayed for several months, and in some cases it may not come at all; but, I ask you, is this a valid argument against the operation? The operation for cataract sometimes fails, there is suppuration of the globe, irido-cyclitis, or other accidents which may lead to failure; and I might bring examples from other departments of surgery that would also illustrate this point. In fact, the operation of ovariotomy for the relief of pain and hemorrhage gives good results in comparison with other operations.

It is true that woman may have some inconveniences associated with the climacteric, but she would be obliged to go through them some time or other if she lived: they are part of her menstrual life. Some women have very little trouble, while others have a good deal and may become drunkards, etc. Fortunately, I have never seen any such results following the operation.

There is one condition, however, which I have seen develop after ovariotomy, after removal of one or both ovaries, and even also removal of the uterus. It is a condition of acute melancholia. I have operated now over nine hundred times, and have seen seven such cases in all. Taking

into account the fact that I lost more of my earlier operations, I think that we may take it for granted that about one per cent. of our cases will take on this form of insanity and will die with the disease. I do not know if other surgeons have met with anything like so many cases in their operations; but we must bear in mind that for some unaccountable reason certain of our cases will be attacked by melancholia. It is the one objectionable point in the operation of which I am aware.

UTERINE MYOMA.

The next case is one of myoma of the uterus; in fact, we have two cases, which I will briefly discuss, without bringing them in, since you could feel nothing, and certainly can see nothing, of the disease.

The first case is 48 years of age, and does not have very much hemorrhage, and I do not believe that she suffers very much pain. In her the tumor is very hard and consolidated. I think that this belongs to the class of cases in which nature is curing the disease and thus gradually relieving the symptoms. The other woman is 40 years of age, and has had hemorrhages: being younger than the former woman, an operation may be taken into consideration, since she has to be tided over some years before her climacteric.

We did not use to operate upon women with myoma, and now, if the patient is forty-seven, we do not operate before giving ergot a faithful trial; but in younger women, under forty, it becomes a very important question. It is a question in which the patient must take a good deal of the responsibility in answering, and contribute a good deal to the answer.

If the patient suffers every month, and loses blood for a week or more, this question comes up: is it preferable for the patient, say thirty-six years old, to go on for twelve or fourteen years suffering in this way, or to perform an operation the mortality of which is about four per cent.? I can only say that if I were the patient I should have the operation done.

Now, this is comparatively a common affection, and we meet with it often, especially in the colored race, in the dissecting-room and post-mortem table, in cases where it gave absolutely no trouble during life, so that we have come to look upon it as of little importance. We are laboring under some traditions with regard to uterine myoma, and this is one of them,—that it is an insignificant affection. I need hardly stop to say that those myomas that give no trouble during life are not the ones that trouble us: it is those that *do* give trouble that apply to us for relief, which it is our duty to give them.

Another tradition with regard to myoma is that it will cease at the climacteric and give no further trouble; but we find that in many of these cases the growths go on developing for years after the menopause should occur, and the patient suffers from hemorrhages that severely affect her health.

There are two operations for the relief of uterine myoma: you may remove the uterine appendages, and by this you remove the tendency to these troubles which afflict the poor patient. It has been now several years—six or seven, perhaps—during which I have employed the operation, which I consider the proper one, as the hemorrhage almost always ceases soon after its performance. The other operation is the removal of the uterus itself; and this may be done if the hemorrhage does not cease after the removal of the uterine appendages.

Now I have come to the end of my cases, and have exceeded my time. What I have brought before you has not possessed the usual interest of a surgical clinic; but I hope that you will pardon that, in view of the important subjects which I have presented for your consideration. Any faults in the lecture you must attribute to my want of experience in lecturing. I have never delivered a clinical lecture in my life until a week ago. It seems to be very unfortunate that in England it is difficult for those who have experience to get the opportunity of teaching, while those who do the teaching have not the clinical experience. You must take what I have said, therefore, not as a lesson from a British teacher, but purely as the views of a British surgeon.

IMPOTENCE IN THE MALE.—Dr. Hammond, of New York, has employed the following with satisfactory results:

℞ Strychninæ sulphatis, gr. j;
Acid. phosphorici dilut., f℥j.

Ten drops to be taken in a teaspoonful of the fluid extract of coca three times daily, before meals.

ORIGINAL COMMUNICATIONS.

SOME OF THE USES OF THE VAGINAL TAMPON IN DISEASES OF WOMEN, AND IN OBSTETRICS.

An Address delivered before the Lehigh District Medical Society at Mauch Chunk, August 19, 1884,

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IT was said that all roads led to Rome: in like manner, I have been informed that all addresses before your body are upon strictly professional subjects, thus leading to the one great end of medicine, the cure of the sick. In compliance with your design, and obedient to honored usage, my effort shall be to present a practical subject, the consideration of which it is hoped may be of some interest and usefulness. In announcing that subject as *Some of the Uses of the Tampon in Gynæcology and in Obstetrics*, let me make peace with those who possibly now think the theme and its discussion too elementary for the occasion,—being wise enough to know that one does not look for whales in the Euxine. For a moment conceding the force of the criticism, still an experience of more than thirty years of active professional work has taught me that my own failures and shortcomings, sins—I had almost said crimes—of omission and commission, were much more frequent in little than in great matters. In truth, observation likewise tells me that minor medicine and minor surgery often become major medicine and major surgery in their results for good or for evil. As it is urged in the religious life to learn from time to time that the foundation of one's faith is broad and strong, in order that the superstructure shall be durable, so in our medical life it may not be amiss, upon occasion, to consider even elementary questions, in order that, our knowledge being clearer and more certain, our judgment and action in emergencies will be unclouded with doubts, undelayed by hesitancy. Peradventure such study may have more practical value for all than a description of the most recently discovered microbe, or a discussion concerning the value of this week's favorite antiseptic.

Further, find me a single text-book upon diseases of women or one upon obstetrics in which the varied uses of the tampon are fully set forth, and I will confess my mistake in the selection of a subject. Let me add, however, that Dr. Mundé has presented with commendable fulness of information and richness of detail the chief applications of the tampon in diseases of women in his well-known and valuable work; but that is not a complete treatise upon diseases of females,—only a book of so-called minor surgical gynæcology,—so that the challenge cannot be met by it.

Finally, it may happen, even in the partial study of the subject which the usual time of an address permits, that questions which are very far from being so simple and elementary as might be imagined may be presented.

Having said this much in explanation, hardly in apology, I pass to the consideration of the subject.

The tampon is one of the most ancient of therapeutic means. Many of the great masters in the past have recognized its value. Among the different pessaries recommended by Hippocrates* is one for menorrhagia, made of wool impregnated with different substances, and then introduced into the vagina,—plainly a tampon. Paul of Ægina† said that an admirable remedy for uterine hemorrhage was a sponge cooked in wine or in liquid pitch and applied. Moschion, who belonged to the age of Nero, recommended the tampon in uterine hemorrhage. By a writer also of one of the early Christian centuries a detailed description of a tampon for this purpose is given.‡ This tampon was made of powdered pennyroyal, galanga, spikenard, nutmeg, and cloves, mixed with an oil, and then placed in a linen cloth *veterem, rarem, et subtilem*, tying securely the powders in the linen, and the mass, having been formed in *modum pilæ*, was passed into the vagina, and secured by means of a bandage externally. No one can doubt the mechanical effect of a tampon thus made and applied. For the same disorder Ambrose Paré advised quinces roasted under the coals and incorporated with powder of

* Eighth volume of Littré's Hippocrates, p. 381.

† Sydenham Society's Edition.

‡ The following is the prescription found in *Gynæciorum*, etc.: Pulverem pulegii; galangas, spice nardi, nucis muscatæ, caryophyllatæ; misce, distempera cum oleo muscellino, vel pulegino. Et accipe pannum lineum veterem, rarem, et subtilem, et intus liga hos pulveres, formandum ad modum pilæ. Et matrice intromissa, os vulvæ cum dicta ut matrix iterum non exeat: et pilam ibi cum fascia superliga, ut non possit exire: et fascia transfire retro usq. ad renes et intra ilia, et ibi ligetur.

myrtle and Armenian bole, then passed into the vagina.

The primary idea involved in the word tampon is that of a plug introduced into a cavity for the arrest of hemorrhage, and thus the tampon was used by many in ancient times; but, as we have seen, the old masters sought also to make it the vehicle for medicinal substances. Modern practice recognizes not only each of these uses, but others also. It will be convenient in the discussion of the subject to refer, first, to the uses of the tampon in diseases of women, and then in obstetric practice. Chrobak* describes the former under three heads: "First, the tampon is used to retain the dressing used after bilateral division of the cervix; a tent, or a stem pessary, to lessen the mobility of the uterus or to keep it in position after it has been replaced.

"Second, it is used for compression, and for the protection of ulcerated, eroded, or wounded parts from friction; it also absorbs their secretion and prevents that of the vagina from coming in contact with them.

"Third, it is used in hemorrhage, and in congenital or acquired contraction of the vagina."

The application of the tampon for the arrest of hemorrhage will be considered in connection with its obstetric uses; and as to the others in the list, time will permit only a few to be presented.

First, the tampon in certain uterine disorders of position. Doubtless the first of these in which the tampon was used was prolapse. Here, usually, the tampon presents an obstacle which, by its greater size, prevents the descent of the uterus. Sponges, rubber bags introduced into the vagina empty and then filled with air, a mass of cotton, of tow, and of other substances, have been thus used.

Dr. Copeman† reported, in 1874, a very interesting case of aggravated prolapse of the uterus successfully treated by a tow pessary; the tow "was covered at the top by, and partially enclosed in, a piece of linen greased on the outside to facilitate its introduction." I think it ought to be added that the external greasing of such a pessary ought to be done not merely to facilitate its introduction, but to prevent its irritating the part of the neck of the uterus resting upon it, and the vaginal walls with which it is in contact: a tow pessary or tampon, even when partially covered with linen, if worn for any length of time, or frequently reintroduced, must cause considerable irritation.

But in those cases where the vagina retains its normal curvature, it is not necessary to have so large a tampon in order to secure support for the uterus. Archimedes, enthusiastic over the discovery of the great power of the lever, would move the world if he could find a place whereon to stand; and so the uterus can be upheld by a tampon which has its base resting upon the posterior wall of the vagina. This point will be made plainer in speaking of retroversion of the uterus, a positional disorder which always precedes prolapse.

As is now well established, posterior displacements of the uterus are more frequent in those who have had miscarriages or borne one or more children, and therefore oftener are brought to the notice of the physician. Moreover,‡ anteversion of the uterus, the bladder being empty, is normal in the parous, and therefore requires no treatment; while in the nulliparous, the uterus in a similar condition of the bladder is slightly anteflexed as well as anteverted, and then also no treatment is needed. Without considering the etiology and the diagnosis of posterior displacements,—the one not always clear, and the other usually very plain,—let me refer exclusively to the treatment of retroversion. Such positional disorder is only possible when the utero-sacral and round ligaments are greatly stretched, and such disorder is only permanently cured when these ligaments have been shortened, or, in other words, have resumed their normal length. The artificial shortening of the round ligaments, as proposed by Alexander, and successfully practised by him and others, for uterine prolapse, is conclusive proof, if any were necessary, of the elongation of those ligaments which occurs in a posterior displacement of the uterus. In the cure of the disorder it is important to give these uterine upholding bands rest, or at least restrict their action so far as can be done without seriously interfering with the normal mobility of the uterus. The practical bearing of this statement will be seen in the consideration of the special means of treatment recommended.

* See Billroth's Handbuch der Frauenkrankheiten.
† British Medical Journal, October, 1874.

‡ See Schultze's recent work, translated by Hergott, Traité sur les Déviations utérines.

Provided there be no restraining adhesions, the restoration of the uterus to its normal position is not difficult either with the fingers or the sound. Since the publication of Dr. Henry F. Campbell's* paper upon pneumatic self-replacement of the uterus, it has been held that the retroverted womb can be put in position by having the patient take the knee-chest position and permitting air to be admitted into the vagina. But the investigations† of Simpson and Hart show that in this position the retroverted uterus, while farther from the pelvic outlet, is more retroverted. How fallacious does our professional experience often prove! Doubtless hundreds of patients have, by direction of their physicians, daily or semi-daily taken this position, and, as both doctors and patients believed, the results were beneficial. Probably the only benefit was the temporary partial anæmia of congested organs and tissues. Nevertheless, although this position does not possess the advantages which have been attributed to it, and although justly characterized by Hart as "awkward and inconvenient," yet it is possible in it to correct a retroversion by the use of the finger in the vagina, or by means of the tenaculum, and then by a properly-applied tampon to keep the uterus in place. Nay, more, the elongation of the vagina which then occurs permits the tampon to be placed higher, fixing the uterus in a more elevated position than can be done when the patient is lying upon her side. However, the advantages in most cases do not compensate for the inconveniences and disagreeableness of the attitude, so that it may be dispensed with in most cases.

Whether the uterus be restored by finger, sound, tenaculum, or position, or by two or more of these combined, restoration must be followed by retention: the errant organ has been put in place, it must be kept in place. If the malposition be all, if the organ itself be healthy and there be no disease of structures adjacent to it, we have no better instrument for general use than the horseshoe pessary of the late Dr. Hodge, especially as modified by Dr. Albert H. Smith. But in how many patients do we find the body, and especially the neck, of the uterus diseased, or the consequences of intra-pelvic inflammation, or an enlarged, tender, sensitive, partially-prolapsed ovary! Very many patients cannot at first bear a rigid support for the womb, the parts upon which a solid pessary presses are too sensitive, and the condition of a patient may be rendered much worse by such instrument. Among the pathological conditions which the cervix may present are unhealed tears that occurred in childbirth. These tears may be quite sensitive, secreting a more or less abundant, opaque matter, and red, bleeding upon the touch with finger or sound. And here let me refer for a moment to the subject which has engaged so much professional attention in this country during the last few years, tears of the neck of the womb, or, as more commonly, though not any more correctly, called, lacerations of the cervix. The latter expression may sound more scientific, and, possibly, in the mind of the sufferer magnifies the disease. The brilliant discovery made by Dr. Emmet a few years ago, and the very satisfactory results which follow the operation known by his name, when that operation is done in suitable cases, all know. But that the frequency and the importance of the accident have been greatly exaggerated, and that an operation for the cure of tears has been many a time unnecessarily performed, I do not doubt. Nay, further, more than once a woman has been made most unhappy by being told that her womb had been so badly torn in her labor that she would never be well until an operation was made, yet in such cases an examination made by competent men, who were too intelligent to be hobby-riders, found no lesions of the cervix, nothing but the ordinary boundary between anterior and posterior lips which the first labor makes. Many a practitioner has suffered unjust reproach because of such alleged injuries in childbirth.

Standing now in my fourth decade of professional life, I have seen changes in the theory and in the therapeutics of diseases of women as remarkable as those which Julian Hawthorne has described as occurring in Archibald Malmaison. I remember, as if it were but yesterday, how one of my own most honored teachers insisted upon irritable uterus as the most important fact in uterine pathology, and that this irritability was the result of displacement of the organ, a displacement which was to be

* Transactions of the American Gynæcological Society, vol. i.

† Female Pelvic Anatomy, by D. Berry Hart, M.D.

remedied by a properly-adjusted pessary. Then the inflammation theory had its day of general acceptance. For a time, leucorrhœa, a mere symptom of several conditions, was not only made a disease, but claimed to open all uterine pathology.

Some years ago, the profession, under the guidance of the illustrious Sir James Simpson, became enthusiastic in praise of bilateral division of the neck of the womb for the cure of dysmenorrhœa and of sterility, but to-day the operation is not done in one of fifty cases in which it would have been done twenty years ago. I also believe that the operation for tears in the neck of the womb will not be done twenty years hence with anything like the frequency with which many now do it. Some of us are slow to think that nature is so cruel to woman in the exercise of her highest bodily function, giving birth to a child, that she necessarily suffers such tearing of her uterus in one case in three—or one in twenty—that it must be repaired by a surgical operation. On the other hand, some of us are slow to think that obstetric practitioners are so ignorant or so cruel that they permit or cause such accidents. It is exceptional when a woman first gives birth to a child that the os uteri is not torn; the chief tears are at the sides, especially the left side of the os; such tears at the side make the distinction between the anterior and the posterior lip, for before childbirth the mouth of the uterus presents a uniform rim or boundary. As a rule, these rents extend only through the crown of the neck, but occasionally beyond it, in rare cases to the vaginal junction. De Sinéty,* in the last edition of his excellent work, remarks that the indications for Emmet's operation are rarely presented; and at the other extreme are those who find them so frequently presented. The latter seem to have the notion that nature does wrong in suffering the mouth of the womb to be torn, and hold, practically at least, that it is the duty of the physician to restore by a plastic operation every parous to a nulliparous uterus, for, as before said, the rule is that there is some tearing of the mouth of the womb in childbirth. In fact, one might possibly express the practice and teaching of these enthusiastic devotees of the operation by parodying the advice given as to the use of a shillalah at Donnybrook Fair,—"Whenever you see a head, hit it:" whenever you see a tear, stitch it. But a tear that neither by eversion of its margins, ectropion, by local or reflex pain, by spontaneous pain, or that evoked by touch, by leucorrhœa, or by menstrual disorder, makes complaint, does not need a plastic operation: the part is too hidden from public view to demand an operation purely upon æsthetic grounds. There are opinions which claim for the operation a prophylactic power against cancer of the organ; but the large and accurate statistics are wanting to prove the correctness of the opinions.

Some who oppose human cremation claim that the ends of justice may be defeated by this process of disposing of dead bodies, their identification being impossible, and thus criminals may escape. Possibly as specious an argument will be suggested against Emmet's operation; for are there not some operators so skilful that they can convert the parous into the nulliparous os, and thus even an expert be deceived, declaring that a woman had never given birth to a child when she may have had several? But, speaking seriously, when such perfect restoration of the external os uteri is accomplished, tearing in a subsequent labor that may occur is almost inevitable.

But, again, many of these tears which make complaint by local disturbance, leucorrhœa, menorrhagia, and pain,—tears which present admirable opportunities and invitations for plastic operations,—can be healed by proper local treatment without scissors and stitches. And this brings me to the application of the vaginal tampon for the cure of uterine retroversion, and certain diseases of the neck of the womb, especially its minor lacerations or tears. The tampon is used in these cases not merely as a support to the uterus, but for compression, and as a means of continuous application of medicinal substances to a diseased part. The medicinal agent which is of most value used with the tampon is iodoform; and a word or two as to this medicine and its application in diseases of women. Iodoform was discovered in 1824, and first used as a medicine in 1836; its antiseptic properties were made known in 1853, and in 1866 it was applied locally and used internally in the treatment of uterine cancer by Eastlake.† It has not

* Traité pratique de Gynécologie, Paris, 1884.

† Transactions of the London Obstetrical Society, vol. vii.

only a decided antiseptic but also an analgesic property; besides, it is absorbed when applied to the neck of the uterus or to the walls of the vagina, appearing in the urine in the form of sodium iodide, and therefore the power of producing absorption belonging to iodine or its alkaline compounds may be claimed for it.

An objection to the free local use of iodoform was at first its expense; but this is no longer of any force, for the medicine can be had at wholesale for four dollars a pound. Another objection to it was its very unpleasant odor; and this objection has never been altogether done away with. Various deodorizing substances have been recommended, such as some of the essential oils, and balsam of Peru; and Rosetig* finally gave his preference to tonka bean, a bean doubtless more familiar to tobacconists than to doctors, and among German snuff-takers a not uncommon content of a snuff-box.

From the specimens which I show you of iodoform ointment I think you will conclude that oil of bitter almonds is the best deodorizer; balsam of Peru is objectionable because it produces partial decomposition of the iodoform with liberation of iodine, and the same holds true of oil of gaultheria. As may be seen by this specimen of iodoform cotton, partial decomposition of the iodoform occurs from the addition of gaultheria, and this change may be attributed to a reaction between the salicylate of methyl and the iodoform.

The form in which iodoform is most frequently used in diseases of women is that of ointment. Martin, for example, who has given† iodoform the highest praise, saying, after a series of applications of it in different uterine diseases, that its value could not be overestimated, used it as an ointment made by combining it with vaseline and lard, adding a few drops of peppermint oil or of balsam of Peru: he used this not only as a vaginal suppository, but also had it rubbed into the hypogastrium. Odebrecht used it as a rectal suppository, and commended its value especially in chronic exudative processes. The only form in which I have used it is that of an ointment composed of one to three drachms of iodoform to an ounce of vaseline. Another form in which I doubt not it may be usefully employed is that of iodoform cotton, some specimens of which as recently made for me by Mr. Harris, in the drug-store of Blair's Sons, Philadelphia, are now shown you. It is made by dipping absorbent cotton in a saturated ethereal solution of iodoform; after the ether has evaporated the cotton has doubled its weight from the added iodoform; that is to say, one hundred grains of iodoform cotton contains fifty grains of iodoform. I think the value of this preparation will prove to be great; it may be used, for example, in place of the ordinary iodoform suppositories in the vagina, both as an analgesic and where a strong disinfectant effect is sought; it would be useful as the part of the tampon applied to the os uteri in a case of abortion where tamponing the vagina is necessary. Certainly, too, the absorption of the agent would be greater if thus used than when incorporated with a fatty body or when mixed with glycerin.

Tamponing the vagina, as well as the application of iodoform, I was led to adopt upon the recommendation of Dr. Taliaferro, a distinguished practitioner and teacher of Atlanta, Georgia, he having published his method and its success a few years ago.

Probably the best material for a vaginal tampon in general is absorbent cotton. Marine lint has been proposed; but this is so harsh I doubt if the tampon made of it could be properly introduced without pain, or worn without causing more or less vaginal irritation.

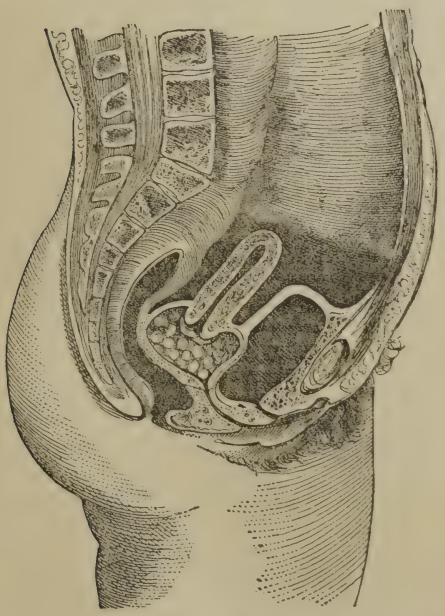
Preparing for the application of the tampon in these cases, one needs ten or twelve round masses of the absorbent cotton, each being somewhat less than a hulled walnut; next, have a piece of cotton, either with or without being first dipped in glycerin, formed into something of a cup-shape, and in the concavity put at least a drachm of iodoform ointment. The instruments needed are a pair of long, curved forceps, and a Sims's or a Simon's speculum. Let me here remark, by the way, that the Sims instrument, as often found in the shops, has altogether too narrow and concave a blade: a broad, shallow blade will prove more useful.

The patient lies on either the gynæcological table or on a hard bed, usually upon her left side, the under arm thrown behind, the lower limbs flexed, and the upper one thrown forward so that the knee touches

* Wien. Med. Wochenschrift, 1881, No. 43.
† Berlin. Klin. Wochenschrift, March 14, 1881.

the couch or table. After introducing the speculum and drawing back the perineum, the position of the uterus is examined, and, if the organ be still retroverted, it is put in normal position by the finger or by a tenaculum hooked in either lip, or simply by passing one or more of the cotton tampons high up in the posterior vaginal cul-de-sac, so as to press the body of the uterus forward, or by tampons placed anteriorly so as to push the neck backward: this done, the entire vaginal vault is filled with the cotton balls, and then the iodoform tampon placed directly over the os uteri; two or three more tampons are then introduced, endeavoring to build a column the base of which shall rest chiefly upon the posterior vaginal wall, and its anterior side upon the anterior wall. The S-shaped curvature of the vagina should, as Chrobak has stated,* be preserved, for

Fig. 1.



there support must come, as well as from the normal apposition of the two walls, and hence the tampon ought to occupy no more than the upper third, or at most upper half, of the vagina (Fig. 1). It is rarely that patients do not from the first find relief from the cotton packing, if properly done, in pronounced uterine retroversion, while congestion, and raw, unhealed, pus-

* Op. cit.

secreting, and readily-bleeding tears of the neck, are gradually relieved and often finally cured. I have seen several cases of cervical tears in which Emmet's operation had been advised—some, indeed, in which I thought it probably would be necessary—entirely relieved by this plan of treatment.

When a tear is thus healed, when it makes neither immediate nor remote complaint, nor interferes with function, the wise practice, as it seems to me, is to let it alone. The old packing is removed and the new introduced once in four or five days during the interval between menstruation. It is very rare to find any offensive odor, provided sufficient iodoform has been used, even if the tampon has been worn a week.

Prior to the packing, in certain cases, it is advisable to paint the vaginal cervix with Churchill's tincture of iodine, or to apply the same medicine to the cavity of the neck or of the body of the womb: the indications for these local applications will be plain. Again, intra-pelvic exudates can be treated by painting the part of the vaginal vault corresponding with their position with the iodine preparation, and then applying either a glycerin or an iodoform tampon.

I have thus presented for your consideration cotton packing and the application of iodoform as a substitute for the ordinary pessary in certain cases of complicated retroversion. I commend it to the consideration of those who have never tried it, or of those who have not tried it efficiently and systematically, firmly believing that a faithful trial—faithful in all details and in continuance—of the practice will give them most satisfactory results.

There is another word to be said in favor of this plan of treatment. It is usual to state that certain forms of uterine pessaries do not interfere with marital rights. Marital rights are oftentimes in diseases of women marital wrongs, preventing or prolonging the cure, to the despair of the patients, if not to the reproach of medicine. Now, I believe that Dr. Taliaferro, in referring to the benefits of cotton packing, stated as one that it secured from sexual intercourse. That is true for the greater part of the month; but, as the packing is removed a day or two before menstruation, and a new one not made until three or four days after, intercourse at long intervals may occur, which possibly is better in some cases than

total abstinence, and certainly is better than frequency.

Let us pass now to the consideration of the tampon in obstetrics. Kormann,* whom I quote as the most recent author of a text-book upon obstetrics, observes that tamponing the vagina is indicated in dangerous hemorrhage from the genitals in pregnancy, in labor, and in childbed. In pregnancy it becomes necessary in the severe bleeding from abortion, or from placenta prævia; in labor, in hemorrhage from placenta prævia, or from ruptured varices, if the os uteri be not sufficiently dilated to permit the immediate ending of the labor, and in the after-birth period, the os uteri having again closed, an excessive anæmia forbidding immediate detachment of the placenta; and, after the labor is over, because of hemorrhage from a tear in the cervix, or from central placenta prævia.

Time will permit the consideration of the use of the tampon in only two of these conditions,—to wit, in abortion and in placenta prævia.

According to Charpentier,† in either of only two conditions is abortion inevitable: those are death of the embryo or fœtus, and rupture of the ovum; but in practice neither condition can be recognized in the majority of cases; we may in some have severe pain, more or less loss of blood, the cervical canal may be so dilated that the finger readily touches the ovum, and fragments of the decidua be discharged, and yet the pregnancy continue. Apart from prophylactic treatment of abortion, the dominant indication in grave cases is presented by the hemorrhage, and the two generally-accepted means for combating this blood-flow are ergot and the tampon. Now, both on theoretic grounds and from intelligent experience, many hold‡ that ergot, acting upon the muscular tissue of the uterus as a whole, tends to imprison as much as to expel the ovum, if given before dilatation of the canal or of the opening through which the ovum is to pass has been effected. But, on the other hand, a tampon properly applied, by pressing upon the neck of the uterus, and upon the lower uterine segment, in the majority of cases increases the energy and the frequency of uterine contractions, thus counteracting any injurious influence of the ergot. In serious hemorrhage, therefore, from abortion the combined use of these is wise practice.

While the primary effect of the tampon is to arrest the hemorrhage, and its secondary one to influence the uterine contractions, there are still two other effects to be attributed to it. Hindering or entirely preventing the escape of blood into the vagina, the tendency of the small quantity that may be poured out after it has been employed is to penetrate between the ovum and the uterus, detaching the former so that the abortion when it occurs is complete, no fragments of the membranes left behind to excite hemorrhage or by their decomposition to become a nidus for septic germs which thence may enter lymphatics or veins. Further, the tampon furnishes a support to the partially expelled ovum, whose walls are so thin, and therefore so easily ruptured, in the earlier weeks of pregnancy: here again we have a protection by the tampon from incomplete abortion.

In the application of the tampon in these circumstances a Sims speculum may be used; but I cannot regard it as essential, or indeed a speculum of any sort. Dr. Emmet has said, "It is impossible to tampon the vagina effectually without the aid of Sims's speculum." Now, there were heroes before Agamemnon, and poets before Homer. I cannot doubt that such men as Wigand and Holst, Dubois and Depaul, and countless others, effectually tamponed the vagina, though they did not use a Sims speculum.

The preparation for tamponing in abortion is first to have the requisite supply of cotton rolled in balls the size of a walnut, and then either have these dipped in a disinfectant solution, squeezing out the fluid, or—and I believe this would be better—have a small quantity of iodoform cotton to be applied directly over the mouth of the womb; next, have the vagina washed out with a two-per-cent. solution of carbolic acid. The patient now, lying upon her back, has her thighs separated, and the physician, having a position on her left side, standing or sitting as may be convenient, separates the labia with the thumb and forefinger of the left hand, or

* Lehrbuch der Geburtshülfe, Tübingen, 1884.

† Traité des Accouchements.

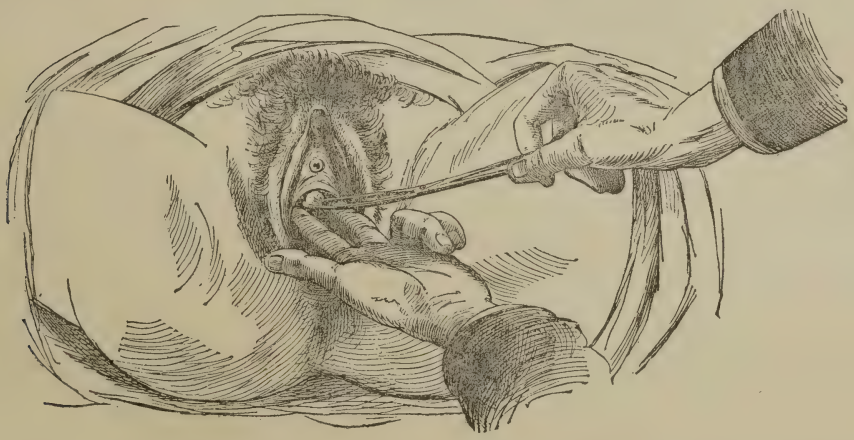
‡ For illustration, Benicke, rejecting ergot in abortion, has said that its use will cause such firm tonic contraction of the uterus that the introduction of one or more fingers is impossible (Zeitschrift für Geburtshülfe und Gynaekologie, 1878: Ueber die Anwendung des Mutterkorns in der Geburtshülfe).

with two fingers, thus holding the vulvo-vaginal orifice open; then, taking one of the tampons with the curved forceps held in the right hand, the cotton is carried up to the vaginal vault, and with the forceps or finger fixed in position, another mass is similarly placed, and thus the process continued until the vaginal vault is filled and the neck of the womb completely surrounded by firmly-packed cotton; next the mouth of the womb is to be covered, and then one or two more layers of the packing are placed immediately below, and thus probably one-third, or a little more, of the vagina is filled. It is not necessary to carry the packing into all the vagina: both Spiegelberg and Kleinwächter, in their well-known treatises, sustain this practice (Fig. 2).

I believe, then, that the proper treatment of inevitable abortion when the hemorrhage is serious is the combined use of ergot and a tampon to which iodoform is added; but I do not believe in the complete tamponing of the vagina, regarding it as unnecessary, nor in the addition of astringents to the tampon, for this is not only unnecessary, but often positively injurious.

Few subjects in practical obstetrics have given rise to more controversy than the use of the tampon in hemorrhage from placenta prævia. Some have claimed the highest value for the tampon, and are content to let the labor go on, provided the presentation is normal and the uterine contractions vigorous, no other means being used; others utterly reject the tampon, and still others use it temporarily,

Fig. 2.



So, too, it is unnecessary to add any astringent to the tampon; such medicine cannot come in contact with bleeding surfaces, but it does come in contact with the vagina, irritating it, causing its unneeded and injurious contraction: if one of the iron salts be used, the vaginal walls may be seriously inflamed. The essential idea in the use of a tampon for the arrest of hemorrhage is not the coagulation of blood, but compression. Most authorities, especially the German, direct that the tampon be left only a few hours in the vagina; but Charpentier says it should remain twenty-four, or, if necessary, thirty-six hours; and certainly, if the iodoform cotton be used, it might be left the longer period mentioned, or even twice as long, without any offensive odor in the discharge when the tampon is removed.

meeting a present indication, but only as a means to an end.

Baudelocque, nearly three-quarters of a century ago, announced the rule of obstetric practice in case of grave hemorrhage from placenta prævia: "The necessity of effecting delivery without having regard to the time of pregnancy, when the loss of blood is so abundant as to imperil the life of the mother and that of the child, has been recognized for more than two centuries."* And yet, if one consults Playfair's treatise on midwifery, referring to the part where the author considers the treatment of placenta prævia, he will see that this important rule of practice is regarded as quite recent in its enunciation.

* Traité des Accouchements.

Grave hemorrhage, then, it will be agreed, is an indication for prompt delivery: that is, deliver if you can. But suppose you cannot: what then? Here we must at once meet the flooding, which carries peril to both mother and child.

Such hemorrhage may occur either in pregnancy or in labor, though if in the former, labor is almost always thereby induced. Here it seems to me that the indication for the use of the tampon is plain, and all, I think, would agree to the wisdom of this practice did the accident occur in pregnancy. So far as the tampon in labor is concerned, the difference of opinion is very decided, two of the most distinguished obstetricians, for example, of this country, Dr. Ellwood Wilson and Dr. Albert H. Smith, rejecting it, I believe, absolutely. The reason for this rejection will be considered hereafter. Pajot and Bailly probably are the most eminent French obstetricians who are willing in certain cases to trust the labor entirely to the tampon. Among all who have in recent years sustained this practice, no one seems to have given proper credit to the distinguished obstetrician with whom it originated quite early in the present century, Wigand. In justice, therefore to him, and as explaining his method, let me quote from a paper* of his. Wigand, after stating that turning and *accouchement forcée* had been the practice generally received in cases of placenta prævia, and stating the serious dangers of such practice, observes, "These matters have been little considered: everything has been accepted as a sad, unavoidable necessity. So stood affairs when I, many years ago, desired and sought to find a better method. I was so fortunate as to find it, and often used it before the eyes of a great and intelligent public, and always with the most remarkable success. I wrote of it and urgently commended it (*im 3ten Hefte meiner Beiträge, Seite* 26, *und im Hamb. Magazin,* 11 *B.*, 2 *St.*, *S.* 107), and until now, so far as I know, *have not had a single follower.*† My method would not be favorably received by charlatan obstetricians,—this I foresaw,—for it is too simple and modest, and cannot, by a mere tampon plainly and gently introduced, produce the noise and sensation that another method has. But that so many sincere and conscientious practitioners, so far as commendation is concerned, have passed over it, and have not even considered the matter worth a trial, I can only explain by supposing that my writings have not come to their notice, or that they (God knows the cause) suspected I had not fully, truly, and correctly observed, drawing largely from my imagination. This suspicion I hope to remove by the present writing, which will sufficiently prove that I, with a large, honest, and industriously followed obstetric practice which kind Providence favored me with, surely did not need to worry myself to deceive and prevent observation, and urge a method drawn from imagination. It has been my earnest desire and great pleasure to learn not only what there was in books, but also to see clearly the writings and occurrences of nature," etc.

In describing his method, Wigand states that in the slighter hemorrhages from placenta prævia he simply directs mental and bodily rest, when the flow stops only gentle exercise being permitted, internal medicines being unnecessary, unless there are some obvious disorders to be corrected. "As soon as the first labor-pains begin, sometimes at the first occurrence of decided hemorrhage, I prepare a large tampon of soft linen, dipped in a thin oatmeal gruel; and the broad end, which is first passed into the vagina, is thickly covered with powdered gum arabic and rosin. The tampon is then introduced, so that it lies in the mouth of the womb, close to the already loosened part of the placenta. In order that the tampon may remain fixed and immovable in the same place, I further fill the vagina in all directions and in all crevices as firmly with linen or fine sponge as can be done without inconvenience to the patient. A thick napkin is closely applied over the genitals, and the parturient then lies upon her left side, with her thighs close together. I hold this position to be the most suitable, because then the placenta, not with its centre, but its border, first enters the vagina; for my observation has taught me that, as a rule, it is the right side of the placenta which is first loosened and comes out of the uterus." After referring to the diseased dynamic conditions of the womb which may occur, and which the physician

* I have taken these extracts from a volume entitled "Die Geburt des Menschen," etc., edited by Franz Carl Naegele, and published in 1820, three years after Wigand's death.

† But after his death he had many followers, and has yet. Some of them—Holst, for example—used a speculum in the introduction of the tampon.

discovering must endeavor to remove, etc., Wigand states that, should the patient after some hours complain of burning in the vagina, he takes out the tampon, replacing it by a fresh and smaller one. "But before the introduction of the latter I observe as to the following: Whether the mouth of the womb is considerably dilated, and whether the placenta has already begun to separate from one side or the other, usually the right. Whether the head or the feet, or some other part of the child, presents. Whether, especially at one side of the cervix, again generally the right side, the presenting bag of water is tense and elastic. And whether one can perceive that the presenting part of the child, as well as the separated border of the placenta, equally move down. If I find any other part of the child than the head, the feet, or the pelvis presenting, I proceed at once to turn the child, doing this with a much greater confidence, as the os is already softened and dilated, and the uterus has entered upon the birth-work and will complete my purpose.

"Once more, is the child's position normal, the configuration of the uterus good, the pains strong and efficient, the progression of the child decided, the tendency of the loosened placenta to place itself at the side of the vaginal wall plain,—if the patient's pulse is full and slow, her temperature good, or even, which is here especially desirable, she has a warm perspiration,—I leave the rest of the labor entirely to nature, which alone, sooner or later, by means of unusually rapid and powerful pains, will expel the living, healthy child, at the same time also the second small tampon, if such has been found necessary to introduce. The placenta was spontaneously expelled in all cases shortly after the birth of the child."

He subsequently remarks, "It must be sufficient for me to assure my reader that I have made use solely of this method in placenta prævia for many years, and have not lost a single child or mother, and, besides, have secured by it for the latter a completely normal lying-in. I do not deny that my method, like any other, has sometimes its own difficulties and complications. Thus, for instance, it cannot be applied with women whose birth-passage is so irritable that they cannot retain the tampon even for the space of fifty minutes; so, too, one would act very unreasonably, and even criminally, if he would use the method when called to a woman who had bled almost to death. But in so many other cases, and applied at the beginning of the labor or of the blood-flow, this method is and remains the most successful. And, even if nothing else shall be conceded to it, it cannot be denied that of all methods it is the most suitable and reliable to properly prepare for the operation of turning, if the latter has become necessary, facilitating it for the parturient and for the operator."

These quotations prove the priority of Wigand in the tampon treatment of placenta prævia, and also show the extraordinary success which attended this method in his practice. But it is also shown that he did not place exclusive reliance upon it, regarding it as suitable for all cases. To-day, I imagine, few practitioners would deny the value of the tampon or fail to use it in certain cases.

Those who object to its use rest their opposition chiefly upon the ground that thereby an open is converted into a concealed hemorrhage. I answer, not if the tampon be properly applied, and if careful pressure be made during a uterine contraction and just after, so that the portion of the tampon which is then forced from the vulva is pushed back, for there is then no space left between the uterus and the upper surface of the tampon, resulting from the recession of the former after contracting, in which the blood can accumulate. Possibly it would be well to have the bandage passing between the thighs—for after tamponing for the serious hemorrhage from placenta prævia the T-bandage is applied—made of elastic webbing or of rubber, and thus the same end be accomplished as is proposed by manual pressure.

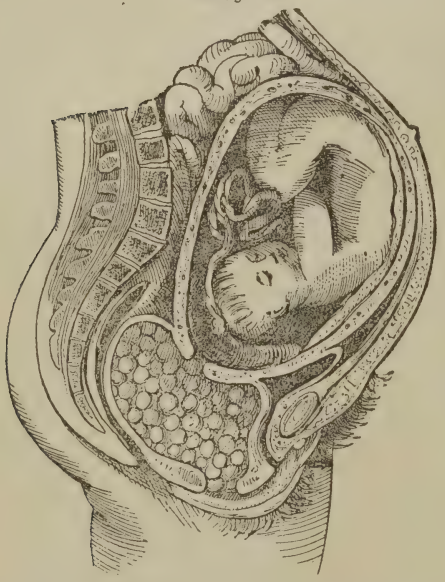
I have said that after a properly-applied tampon hemorrhage is arrested. How, for example, could any serious blood-flow, external or internal, occur when a tampon has been applied according to Dubois' method?

Depaul* has given the following description of that method, stating that he himself had followed it both in hospital and in private practice, and that it gave him excellent results. He directs about sixty balls of charpie, each about the size of a pullet's egg, to be prepared. A thread is

* Leçons de Clinique obstétricale.

attached to the first twelve that are introduced, then these are coated, as the others, with cerate, both to facilitate their introduction and so they may form a more compact mass, less easily penetrable by the blood, and insinuating themselves more readily in the vaginal cul-de-sacs. "I do not use a speculum in order to introduce them, since I regard this instrument as useless, if not injurious, for often its introduction causes an increase in the flow. I place in the vagina the index finger of my left hand, and, introducing with my right hand a ball of charpie having a string, the index of the left hand passes it up in the posterior cul-de-sac and keeps it in place. A second ball is similarly introduced and put by its side; then in turn a third is introduced,

FIG. 3.



and thus on, until the vagina is completely filled, and even distended. Two pieces of charpie are placed in the vulval orifice, and over these a square compress, and a T-bandage is used to keep all in place" (Fig. 3).

While it is possible to tampon effectually, as is to be seen from the extract just read, without the use of a speculum, yet this will be facilitated if one has the instrument of Sims or of Simon in the operation. But in either case, as in the tamponing for abortion, astringents are unnecessary, but an antiseptic is always to be remembered.

It must be admitted that the tendency of obstetricians has been in recent years to the rejection of the tampon. Kleinwächter,* for example, asserts that tamponing the vagina in hemorrhage from placenta prævia is irrational. Probably the just appreciation of the tampon in placenta prævia has been given by Müller in his well-known work:† "We draw from these studies the correct conclusion as to the action of the tampon. It is not to be looked upon as a sovereign remedy, as its friends claim, nor to be excluded from therapeutic means, as its opponents desire. The tampon is an important aid, but, like many others, only in the hands of those who can properly apply it. Use it at the right time, and then no longer than is necessary. Apply it when the mouth of the womb is rigid and slightly open, if violent hemorrhage occurs, for immediate delivery is impossible. You can by it gain time without danger, for, even if it does not stop, it lessens the bleeding and prepares the yet unprepared birth-parts for labor."

It is foreign to the purpose to speak of other methods of treating placenta prævia, or I might refer to those of Puzos, Simpson, Barnes, Cohen, and others, and speak of the success of Dr. Davis, of Wilkesbarre, by a modified Cohen method, and of the more recent extraordinary successes of Hoffmeier and of Behm, though really those successes are no better as to maternal mortality, and very much worse as to fœtal mortality, than Wigand claimed by his method.

May the day come when in regard to this, and to all other great questions of therapeutics, there shall be common consent as to the rules followed! "So runs my dream." But whether it came out of the horn gate or out of the ivory gate I do not know: time will tell.

1902 CHESTNUT STREET, PHILADELPHIA.

SULPHIDE OF CARBON AS A DISINFECTANT.—After a review of the subject at the request of the Prefect of Police, Dr. Dujardin-Beaumetz recommends burning sulphide of carbon in an apparatus constructed for the purpose in the locality where a cholera-patient has been lying. Burning sulphur is the best disinfectant, but there is also a danger of burning the house in careless hands.

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* Grundriss der Geburtshülfe, 1881.
† Die Placenta Prævia, Stuttgart, 1877.

REPORT ON THE PROGRESS OF GENERAL PATHOLOGY AND CLINICAL MEDICINE.

BY JAMES C. WILSON, M.D.,

Physician to the Philadelphia Hospital and the Hospital of the Jefferson College.

ON INFLUENZA.

THE obscurity of the exciting cause of influenza has baffled observers from the earliest records to the present times. The resultant of the combined labors of all investigators has been simply the negative proposition that it is not any of the many things that it has been from time to time suspected to be. On the principle of exclusion the disease has been referred to miasmatic origin, and in accordance with our present views such a cause must be an organized germ,—*miasma vivum.* Upon no other hypothesis can the pandemics that have at longer or shorter intervals overrun the greater part of the earth's surface be explained. Notwithstanding the general acceptance of the theory of a living cause, even the late epidemics have afforded no actual proofs of its existence. Kormann, in a recent monograph on influenza, predicted that, with improved methods of investigation and a far greater knowledge of the natural history of microphytes than heretofore, we were in a position to recognize this miasm in the next epidemic that appeared. This certainly has seemed most probable to those who accept the parasitic theory of the infectious diseases, and who believe that the specific exciting causes of tuberculosis, pneumonia, erysipelas, enteric fever, malaria, cerebrospinal fever, and other infectious diseases have already been discovered and isolated. Whilst the great mass of scientific medical men hesitate to accept in their entirety the radical views of the German school, simply because much of the material upon which these views are based is not yet fully worked out, it is apparent that the work already done is having its influence, and that the drift of opinion is strongly towards the acceptance of the germ theory of disease, not in its original bearing, but in a far wider and more comprehensive sense.

Dr. Otto Seifert studied influenza in a limited epidemic that occurred in Würzburg during the winter and spring of 1883, with great minuteness and painstaking, with a view of clearing up some of the still uncertain points in its symptomatology, and more especially with reference to its exciting cause. He has published the results of this work in *Volkmann's Klinische Vorträge* (No. 240, June 20, 1884). The epidemic did not present in all respects the characters usually manifested by unquestionable influenza. It was a localized outbreak, and was associated with a grave epidemic of measles in the beginning, and with a very general outbreak of whooping-cough towards its close. Nevertheless, Dr. Seifert, who saw seven cases in hospital and three in his private practice, and who heard of others from his colleagues, was satisfied of the nature of the affection, which conformed in many particulars to the ordinary clinical descriptions of influenza. First, of the fever: This showed a gradual ascent, with morning remissions, like that of typical enteric fever, to a maximum of 38.8° or 39.5 C. on the third or fourth day. The decline, beginning at once, was critical, and occupied two days or at most a part only of the third day also. After this the temperature-wave was irregular.

The spleen was in some of the cases enlarged, an observation in accord with that of the majority of observers, and thought to be of importance in view of the difficulties of diagnosis between influenza and enteric fever and intermittents. For my own part, I believe these difficulties can only occur under the most exceptional circumstances. It is not probable that a hesitancy to make a diagnosis could arise in either case except at the beginning of the attack, and the presence or absence of slight enlargement of the spleen would not be of sufficient diagnostic importance to decide any doubtful case.

Dr. Seifert's most important investigations were those bearing upon the etiology of the disease. He found in the mucus expectorated great numbers of micrococci, which measured 1.5 to 2.0 μ in length and 1.0 μ in breadth (magnified 350 diameters). They at no point occupied any definite relation to the pus-cells, and were situated neither within nor upon them. They were arranged in chains, or in pairs, or scattered singly. They were found in the sputa and nasal secretion of all the cases, but were not found in the secretion of the conjunctival sac, nor in the blood. They were not found in the sputa of the ordinary cases of other forms of bronchial and pul-

monary catarrh. They were best colored by methyl violet. The inoculation of two guinea-pigs was not followed by the symptoms of influenza. Culture-experiments were not carried out. Dr. Seifert proposes to call this microphyte the influenza-coccus.

Our judgment upon this subject must be held in abeyance until further researches in unquestioned influenza epidemics are made, and until the peculiar coccus, if found, shall have been cultivated and tested by inoculation experiments.

In view of the parasitic nature of the cause of influenza, and its apparent restriction to the mucous membranes of the naso-bronchial tract, Dr. Seifert suggests, in addition to the usual symptomatic treatment, direct local measures. These may consist of nasal douches of such disinfectant solutions as are least liable to irritate the tissues, and in the inhalation of like substances.

SPIRILLUM.

Dr. F. A. Mülhaüser, of Speier, has contributed to *Virchow's Archiv* (July 9, 1884) an elaborate paper upon this genus of microphytes. His researches have resulted in a wide extension of the general knowledge of the subject, and especially in reference to its relation to relapsing fever (Rückfallstyphus).

Spirilla are microscopical bodies of the form of a spiral, and with the property of spontaneous movement. They have been long known, and were described and delineated by Ehrenberg, Dujardin, Pritchard, and others, and have been quite recently made the subject of close investigation by Cohn, of Breslau. On account of their capacity of free and lively movement, they were referred by the earlier observers to the Infusoria. Recent investigators look upon them as low plant-forms. They have been found by chance in fluids of various kinds. There has been, however, neither sure way of finding them nor definite place in which to look for them. Therefore these delicate, quick-moving little organisms long continued to be regarded chiefly as curiosities of microscopical research.

The peculiarity of their form and the liveliness of their movement have excited a great interest in all who have observed them, and but for the difficulty in discovering their habitat they would have long ago become a favorite object of microscopical study. In 1873, Obermeier made the remarkable discovery of spirilla in the blood of patients suffering from relapsing fever. These resembled in all respects those previously seen under other circumstances. Owing, however, to the difficulties of the whole subject, very little advance has been made until the present time in our knowledge of these parasitic microphytes. The success of H. Vandyke Carter in cultivating spirilla in the blood of monkeys by means of the inoculation of the blood of relapsing-fever patients is well known. Cases of relapsing fever, fortunately, are rare and transient. Dr. Mülhaüser complains—purely from the stand-point of the microscopist, I trust—that epidemics of this disease have not yet occurred in South Germany. Notwithstanding this fact, his researches have been bountifully rewarded, and he has discovered a locality in which spirilla are to be found at all times and in abundance. He found on one occasion in the stool of an enteric-fever patient, after it had stood a long time, a number of spirilla of large size (Spir. volutans). Further investigations in the same direction, it is true, failed. But the field of investigation was extended so as to include various putrefying fluids. At length spirilla were found in the water of a vase of flowers. Foul infusions or macerations of the most varying mixtures of both animal and vegetable substances, bog-water, drain-water, mucus, fæces, contained other microphytes of various kinds, but in most instances no spirilla.

Finally, in the places where the discharges of the domestic animals are collected, namely, dung-heaps, spirilla were found in abundance. The oozing fluid of such places contains everywhere, and at all seasons of the year, these little organisms in such numbers that they appear to be an essential product of the processes going on in it. It contains that form of spirillum which appears to resemble most nearly the spirillum of relapsing fever, and that form only.

Those interested in following the author's description of the development of spirilla, of their various forms, and his lucid account of their movements, their striving after oxygen, and other matters of their natural history, which is indeed wonderful, are referred to the original. I quote briefly some statements which are of peculiar interest to physicians:

Fully-developed, long spirilla live usually during only a single day, and it is the result of a most wonderful chance that Dr. Obermeier came upon them in this short period in the blood of patients. They are the cause of relapsing fever, and not accidental appearances, not *épiphénomènes*, as Lewis believed.

Relapsing fever constitutes an experiment by which is determined the length of time required for the development of the spirilla and the influence of warmth and albuminate. Rühle (1883) stated that observations under the microscope showed that the fully-developed spirilla reappeared in the "moist chamber" at the same time as in the blood of the patient. At the height of the primary attack the long spirochæte fall to pieces, forming the seed of new spirochæte, which on the seventh day of the intermission are full-grown, and this process repeats itself until the death or convalescence of the patient. It is not the high temperature, as Heidenreich believes, that causes their destruction, but their age. This refutes the view of Lewis and Murchison that the spirilla are the result and not the cause of the fever. The more contagious a disease, the finer and more movable its spores. Mülhaüser believes that the spores of the spirochæte of relapsing fever are so minute that, borne in the air, they enter the body by the air-passages or by contact with the skin, and thus in susceptible persons produce the disease.

In this connection, the following remarks, published in 1881 in an article on Relapsing Fever,* are not wholly without interest:

"The conclusion that this parasite has to do with the causation and development of relapsing fever is inevitable. It constitutes the contagium. The spores of these spiral filaments, communicated from individual to individual, spread the disease. Finding in the human body the conditions favorable to their development, they multiply indefinitely. The functional perturbations to which their presence gives rise constitute the phenomena of the fever. It is probable that, under favorable circumstances outside the body, their existence may be prolonged through a considerable length of time. This existence may be latent, yet capable of assuming the most energetic activity when introduced into the human body. Such being the case, the possibility of transmission to remote points follows, and the rise of epidemics at considerable intervals of time and at points far distant from each other is comprehensible without the assumption of the independent origin of the germs of disease, or the new development of an old poison. It is much more in accordance with the general laws of nature to accept a continuous concealed existence of the germs than to have recourse to spontaneous generation to account for their development.

"The origin of an epidemic is due to the importation of the *materies morbi* in the person and belongings of a patient, or in other materials from an infected locality, *or else to circumstances calling into activity germs that have maintained a latent and harmless existence during a more or less extended lapse of time.* The history of relapsing fever in all great epidemics points to scarcity of food and its attendant evils as the conditions favoring the activity of relapsing-fever germs.

"When the disease has appeared in any locality it spreads with great rapidity by contagion, but in every community it forms centres of greatest prevalence. *These foci are determined by the dense crowding together of the poor in the most wretched quarters of cities, and by impure drinking-water and stagnant water in the neighborhood of dwelling-houses.*"

THE ETIOLOGY OF PHTHISIS.

It is certainly a striking fact that in two instances within as many months earnest protests against the too-ready acceptance of the conclusions drawn from the discovery of the bacillus tuberculosis have been published in Berlin. In *Virchow's Archiv* for June 6, 1884, Wargunin, of St. Petersburg, called a halt, and urged upon the profession the importance of hesitancy in accepting views so radical and as yet unreconciled to universal clinical experience. The theory of Koch calls up a host of questions which, in its present phase, it is inadequate to answer. This protest is based upon an elaborate study of the lesions produced in the lungs of dogs compelled to inhale repeatedly (*a*) the pulverized fresh sputum of phthisical persons, (*b*) the same disinfected, and (*c*) the sputum from a patient suffering from emphysema,

* The Continued Fevers. By James C. Wilson. New York, 1881.

and mixtures of cheese and of meal. The result was in all these experiments the same,—the production in the lungs of disseminated lesions of exactly the same kind, having the macroscopic characters of tubercles. Histologically, however, the process was essentially a lobular broncho-pneumonia, resembling the desquamatic pneumonia of Buhl, and etiologically to be classed in the category of pneumonias due to the inhalation of foreign substances. It is true that the bacillus was not found, for the announcement of its discovery was made just as Wargunin's researches were concluded, and it was not sought for. Nevertheless, that those disseminated lesions were not tubercular may be assumed from the fact that all the dogs thus treated, which were afterwards placed under good hygienic conditions and allowed to live, fully recovered, and in two of them that were killed for examination after a period of six months the lungs were found in an entirely normal state. In none of the dogs subjected to these experiments were there evidences of any general disease.

Dr. P. Langerhans, of Madeira, contributes to the same journal for August 5, 1884, a paper which is of interest as embodying the results of observations bearing upon the positive influence of heredity in the etiology of phthisis on the one hand, and the negative influence of such exposure as is peculiarly favorable to the spread of diseases by contagion on the other. These observations, conducted with much painstaking, and in a singularly circumscribed locality, the island of Madeira, and in particular its capital, Funchal, and its immediate surroundings, are worthy of a more extended notice than the present space at my disposal permits. Koch demonstrated that the bacillus caused acute miliary tuberculosis. The bacillus is thus the virus of acute miliary tuberculosis. But neither Koch nor any other of the many experimenters who have performed inoculation with the bacilli and with tubercular débris have succeeded in bringing about a process which bears the most remote resemblance to chronic pulmonary phthisis. The bacillus is, it is true, present here, and often in abundance. But its presence by no means determines its causative relation to the primary lesions, nor even, in the absence of further evidence, to the secondary lesions of this complex lung-affection.

The objections to the theory of Koch appear to Dr. Langenhans so well founded that they deserve the most earnest consideration, especially in view of the present "bacillus enthusiasm." Two methods of observation must yet be worked out.

First, the examination of the lesions in the early stages of phthisis; second, the critical study of all possible etiological factors. His paper is a contribution to the second of these methods.

In the limited colony of foreigners at Madeira he has had the opportunity of tracing out from registers and other information the personal history of 267 persons, resident on the island in the year 1836, when the necessary data were for the first time preserved. Of these, 210 were in good health and had no traceable hereditary predisposition; 57 were members of families who had settled upon the island on account of pulmonary diseases.

Of the 210 healthy persons, 86 were still living at the date of the writing of the paper; 124 deceased; 4 had died of phthisis; none of those still living suffered from that disease.

Of the 57 consumptive or predisposed persons, 5 were in 1836 under 10 years of age. Of these 5, none died under the age of 20 years; 35 are deceased, 9 of them of phthisis.

A second group consists of persons who came to Madeira after the year 1836 and before the year 1864, and whose stay upon the island continued till death or extended over a period of at least twenty years. This group numbered 115. Of this number 83 were sound, 32 consumptive or predisposed.

Of the 83 sound persons, 31 were at the date of writing deceased,—none in consequence of phthisis,—and not one among those still living presented any sign of that disease. Of the 32 consumptive or predisposed persons, 22 have come upon the island suffering from established phthisis, 10 merely predisposed by descent. Of the 22 already ill, 12 died of the disease,—7 at Madeira, 5 elsewhere; 5 died of other affections, making in all 17 deceased. Of the 10 merely predisposed, none have developed the disease. A third group is of especial interest. It comprises the children of the 267 residents in 1836, and of the 115 later comers, numbering 253. Of this number 147 were healthy, 106 consumptive or predisposed. Of the 147, 28

have died,—1 of phthisis; of 119 still living, none have phthisis; of the 106, 23 have died,—8 of phthisis; and of 83 still living, 8 were known to suffer from phthisis.

Of 635 persons thus far, 440 were sound, 195 consumptive or predisposed.

Of 440 sound, 203 are deceased,—5 of phthisis; 237 are yet living and free from phthisis.

Of 195 not free from taint, 75 are deceased,—29 of phthisis; and of 120 still living, 12 suffer from the disease.

These figures are subject to the errors which affect such statistics everywhere; but the elaborate tables and analyses of Dr. Langenhans certainly amount to evidence of great importance as to the influence of heredity.

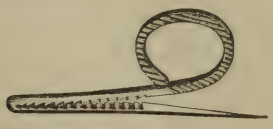
On the other hand, the life on the island has been extremely favorable for the spread of phthisis by contagion, if such had been its method of extension. The sick and the well live in this community, as everywhere, in the closest association, occupying the same houses and the same rooms, using the same furniture and utensils.

In conclusion, it is proved by actual case-histories that in the health-colony at Madeira, since 1836, those individuals only, almost without exception, have contracted phthisis in whom there existed a hereditary predisposition, although the different constituents of the colony were exposed in precisely the same way to the same favorable conditions for infection.

NEW INVENTIONS.

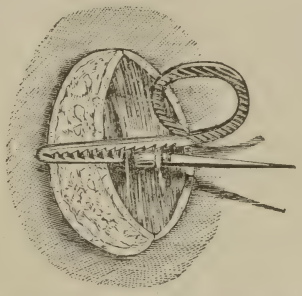
AN ARTERY-COMPRESSOR.

A CONVENIENT and effective appliance has been devised by Dr. Levis for the rapid arrest of hemorrhage in large open wounds. It is exceedingly simple and inexpensive.



Numbers of the compressors can be quickly applied during an operation, and the surgeon may leisurely ligate the vessels if, after their removal, the ligature should be required. In many operations, attended for the time by great hemorrhage from numerous small vessels, the temporary stasis produced by the compressors will be sufficient to prevent further flow.

By this device the operator can proceed to the end of an operation without stopping to apply ligatures.



The instrument and its application are so illustrated in the cuts that description is unnecessary.

The compressors are made by Snowden, 7 South Eleventh Street, Philadelphia.

NOTES OF HOSPITAL PRACTICE.

MEDICO-CHIRURGICAL COLLEGE.

CLINICAL SERVICE OF JAMES E. GARRETSON, M.D., PROFESSOR OF THE PRINCIPLES AND PRACTICE OF SURGERY.

SURGICAL TREATMENT OF NEURALGIA.

TO-DAY, gentlemen, I am to bring before you four patients illustrative of extremes in the surgical treatment of a condition known to the general public as neuralgia.

As the hour will be fully occupied in the operations to be performed, I shall enter into no discussion as to the multitude of causes out of which nerve-pain arises and in which it exists, but will proceed at once with what is to be done, suggesting, parenthetically, that science applied to the treatment of neuralgia means knowledge directed to appreciation of relationship between cause and effect. Pain is intangible: it is not to be seen, tasted, touched, or heard; it is not substantive; it is phenomenal; neuralgia is not principal.

Case I.—The young gentleman now introduced is a professional *confrère*. For three years he has been a martyr to facial pain of an excruciating character, the region affected being the infra-orbital. During these three years the sufferer has been my patient, and during these years I have

exerted myself to get understanding of the lesion which holds the meaning of the pain, and which, whatever it may be, is to be removed as making our only road by which pain may follow. I stand before you this hour confessedly ignorant of the cause of the man's pain; to me it has proved beyond finding out.

What is to be done with effects of this character where causes cannot be discovered? How many are the experiences suggested to the recollection of every practitioner by the query!

Facial neuralgia is at times of a character that is simply unbearable. Something has to be done. The something is anything that will afford ease. A present good is discounted at the expense of a future ill. You object to what you do, yet do it. You disclaim, but perform.

Now, if there be one class of men which, beyond all others, should avoid the use of morphia, it is the student class. Here in my hand is a hypodermic syringe. It is charged with one-quarter grain of morphiæ sulphas, dissolved in eight drops of water. Because that the patient cannot endure his pain, and because, truthfully, I know not how else to relieve him, I am going to place this morphia beneath his skin. Objecting as I do to the use of any opium preparation, you are to accept that in the present, as in any of my cases, I resort to the drug only when pushed to the wall. For months I relieved our friend here by the nightly use of a Volta's pile bound over the paining part; indeed, the relief continued so long that we were both congratulating ourselves on having come to a cure. On failure of the pile, Blaud's pills were used, in doses of fifteen grains of the dried ferri sulphas, and the same quantity of carbonate of potash daily. Apropos, let me say that in cases of the unexplainable neuralgias no single remedy has proved so useful as these pills. My prescription is as follows:

℞ Ferri sulphatis exsic.,
Potassii carbonatis, āā gr. ccl.;
Syr. acaciæ, q. s.—M.
Ft. pil. no. 100.
Sig.—Begin with three a day, and increase to six; take several hundred.

A remedy that not infrequently proves serviceable in paroxysmal neuralgia is Duquesnil's preparation of aconitia, in doses of gr. $\frac{1}{200}$, repeated each two hours until numbness is felt; but in this case it did no good.

Brown-Séquard's somewhat famous pill amounts generally to nothing: here it was tried faithfully by the patient on his own prescription.

A local application commonly of great use, but here yielding no result, is a combination devised by Dr. J. L. Ludlow:

℞ Atropinæ sulphatis, gr. ss;
Aconitinæ, gr. iss;
Olei tiglii, gtt. ii;
Ung. petrolii, ʒii.—M.

Not to delay, it may simply be added that I have looked this patient all over in search after cause, and have, as yet, failed to find it. I have treated him tentatively with every medicine in which lay hope of doing good, yet have secured no cure. It is to be the contents of this syringe, gentlemen, or it is to be agony. The former seems to me to be the smaller of the two evils: so I choose it.

In employing medicaments hypodermically, attention is to be directed to the avoidance of throwing the fluid into a vessel, also to the prevention of abscess. In the first matter knowledge of anatomy and the sense of sight are to be used. In the second, care is taken to avoid rupture of the cellular tissue, an accident which happens alone to the physician who is in too great hurry to get through the operation.

Standing over the patient, I introduce the needle by the side of the nose. The syringe, as you see, occupies an inverted position. I force the piston a trifle, but depend partly on gravity to get the morphia deposited. I break no cells, and will have no abscess.

Case II.—The second case is this robust colored man. His trouble is sciatica; that is to say, he has neuralgia, or nerve-pain, in the sciatic region. The cause here is rheumatism. To afford immediate comfort to the patient, I charge a syringe with eight drops of chloroform and introduce the needle its full length into the muscles of the ilio-femoral crease. "Does the injection burn?" we ask him. His reply is, "Not particularly."* In two days this application will be repeated, while at once the man will be put on the use of strong lemonade.

Here a very practical experience is to be kept in memory: hypodermic injection of chloroform, while affording relief from

* In half an hour the man was entirely free of pain, from which he had been suffering for two weeks.

neuralgia as the sciatic region is affected, acts exactly conversely when used about the face.

Case III.—The patient before us is, as you see, a delicate woman. The neuralgia here is of long standing, and confines itself to the region furnished by the temporal branches of the auriculo-temporal nerve. A peculiarity is the continued manifestation of vascular disturbance limited to the immediate locality. The intention in the case is to ligate the temporal artery and to exsect the auriculo-temporal nerve.

To do either, or both, of these operations, I will commence by making a vertical incision along the front of the ear, reaching, below, as far as the zygoma. The vessel lies under, or rather in, the temporal aponeurosis, and to reach it safely a director is wisely employed. [The artery, having been exposed, was then ligatured.—REP.]

The vessel being now taken care of, I search for the nerve. No difficulty is experienced, you see, in finding it: I show it raised upon the hook. I now dissect out a portion and cut it off. The wound will be put up to unite by first intention.

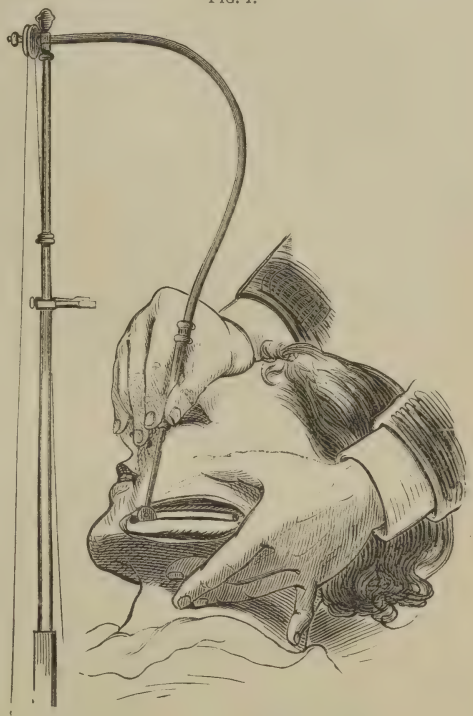
Case IV.—The present case is to show an extreme as to operations for nerve-lesions. The affection here is disease of the inferior maxillary nerve and of its mylo-hyoid branch. The performance proposed is exsection of the root of the nerve where it issues, at the base of the skull, from the oval foramen.

The manipulations to be practised will worthily command your close observation. The intention is to show how, by means of instrumentation, complexity is resolvable into simplicity. I am to show that the foramen ovale is to be reached without making observable scar upon the face, and without disturbing the integrity of the lower jaw.

Several years back, having occasion to exsect the inferior maxillary nerve for a refined and very handsome young lady, I was urged by recognition of the deforming scar left by the usual operation to set to work to devise a better. What grew out of the study is shown in the plate handed around (Fig. 1). A glance at the diagram by the surgeons who favor me with their presence this morning will, I am sure, render either description or commendation unnecessary. I do not hesitate to say that I think it will be long before the device is improved upon. The incision seen, it is to be understood, when healed, is in the shade-line below the jaw.

Fig. 2 shows a second operation belonging to the surgery of the region, which I devised and practise for securing section of the same nerve where it emerges from the skull into the zygomatic fossa. This

FIG. 1.



is the performance I am now to execute in your presence.

The patient, the gentleman just brought in, is a great sufferer from persistent neuralgia, related with the inferior maxillary nerve and with its mylo-hyoid branch. He can neither talk nor eat with comfort. He describes his life as made by this pain altogether miserable. He is one of a class which asks itself, not without a show of philosophic reason, "Is life worth living?"

The resolution of philosophic conundrums of this class lies always with knowledge. All that is needed is to know how to change the aspect of a condition. Luckily, as the present case is concerned, wisdom abounds in this clinic. We have learned that the man's neuralgia relates with a diseased nerve, and we know how to rid the sufferer of the nerve.

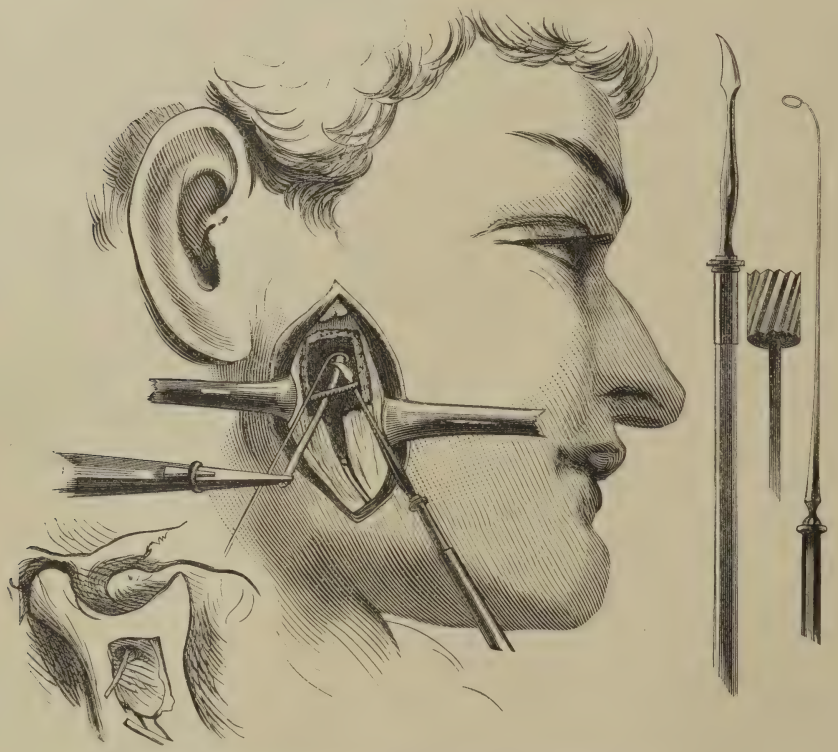
You understand that it is the intention

*

to expose the situation of the oval foramen and to excise the nerve. The patient being etherized, I commence with an incision which begins an inch above the angle of the jaw and which is carried downward and forward to the length of an inch in front of it, this cut being in the shade-line below the bone, which shade-line, to avoid injury to important parts covered by it, is pulled upward upon the jaw and thus incised. Ligation of the facial artery is commonly made necessary as a result of this first step. . . . It is

Here I introduce the surgical engine. The meaning of this machine is to revolve cutting instruments. I show you (held in my fingers) a burr. This burr is unimportant-looking, but when in revolution ten thousand times to the minute you may trust it to make a hole through the front of a brick house. A burr running ten thousand times to a minute shows no motion, but I would not advise you to trust its quietude. Here the intention is to cut into the face of the maxilla until the canal is opened and the nerve exposed. This I

FIG. 2.



The artery in the diagram should be placed higher: it crosses the sigmoid notch.

required in the present instance, as the spurting vessel makes evident.

Hemorrhage controlled, retractors are introduced, as here done, and the lips of the wound separated. Now is exposed, as all see, the periosteum-covered bone. A succeeding step uses the raspatory, which quickly denudes the part of a limited portion of its covering. I ask you to observe the extent of the part uncovered. It is not great,—sufficient simply to make ready for that which is now to follow.

proceed to do. . . . A single minute has, as you remark, sufficed to accomplish it.

Next, I pick up the nerve, and, cutting it in twain, I grasp the end next the brain in the teeth of the bull-dog forceps. Lifting it by means of this convenience, I follow upward with the burr until, as now I feel, I am at the situation of the posterior dental foramen. This foramen it is the intention and purpose to enlarge (see Fig. 2). With the instrumental means possessed, no difficulty is experienced in doing

this. True, a steady hand, acquaintance with the anatomy of the part, and a knowledge of the instrument you handle are not unimportant addenda; but, as you perceive by the present easy going on of the process, there is nothing at all difficult or complicated in the performance; perhaps, however, there is a little in "the know how."

The nerve being now firmly in the grasp of the forceps, and an opening of sufficient size being made in the ramus of the jaw, attention is to be given to a hemorrhage which you recognize as coming, not from the internal maxillary artery, but from the inferior dental. I have simply to pick out the vessel and to cast a ligature about it.

The audience is now to observe that I can pass a fenestra about this nerve, and that I can touch with the projected instrument the oval foramen. (Dr. Janney, the ex-coroner, who sat close to the operator, was asked to repeat the operation, which he did, passing the instrument the length of the zygomatic fossa.) Now, what I need to complete the operation after a high scientific method is a delicate guillotine, which Mr. Kolbe is engaged in making for me after a pattern, but which, not being ready, I duplicate with a tenotome, an instrument dangerous to use by reason of the presence of the internal maxillary artery, which, as is to be remembered, passes from the carotid externus immediately across the head of the jaw and is inconveniently in the way of a sharp blade.

I show you, gentlemen, the incised nerve. The operation is done.*

TRANSLATIONS.

Parenchymatous Injections of Turpentine in Malignant Growths.—From a series of injections of turpentine into the interior of malignant growths in order to influence their development, Dr. Vogt reports (communications from the Chirurgical Clinic in Greifswald) as follows: The first case was a return after extirpation of a carcinomatous breast, which showed itself as a rapidly-growing tumor pressing forward from the anterior mediastinum. One-half of a Pravaz syringeful of a solution of equal parts of alcohol and oil of turpentine was injected. In a few hours there was severe pain, fever, and erysipelatous redness of the breast. After forty-eight hours the temperature declined, but the general malaise lasted several days longer; the tumor had become visibly contracted. In ten days a second injection was made, with the same effect at first, but afterwards an abscess formed. Two more injections were made during the next few weeks. In the course of two months a gradual shrinkage of the tumor took place, which then remained as a decidedly hard tumor without any abnormal heat. The patient was then discharged.

The second case was one of multiple sarcoma, which was treated in the same way, with the same results, including the abscess. In the course of five weeks, after repeated injections, the tumor had almost disappeared.—*Centralblatt für Chirurgie*, No. 36.

Salicylic Acid as a Prophylactic against Cholera.—Dr. Beaudon, in a letter to the *Bulletin Général de Thérapeutique* (August 30), recommends the systematic use of salicylic acid as a prophylactic agent in case of a cholera visitation. He proposes a five-per-cent. alcoholic solution, of which a teaspoonful is to be added to a glass of water: with this the hands and the mouth are to be washed two or three times daily. This precaution should be especially exercised by medical men, who, in case of epidemic, are called upon to expose themselves to the contagion. A teaspoonful might also be taken, in water, with the meals. This method, if it does not destroy the microbes, will at least put the patient in a condition less favorable for their development.

Cauterization of the Wounds made by Rabid Animals.—In commenting on the report of a case of rabies, Dr. Dujardin-Beaumetz endorsed the following recommendation of the Conseil d'Hygiène Publique contained in a publication in 1882:

"The cauterization should be made with Vienna paste, chloride of zinc, butter of antimony, and especially with the hot iron, which in such cases is the best of the caustics. On the contrary, the use of ammonia, the different alcohols, tincture of arnica, and carbolized solutions is absolutely inefficacious."—*La France Médicale*, No. 106.

* The operation was done on September 6. The relief continues perfect up to the date of this issue, October 4.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 4, 1884.

EDITORIAL.

VOLUME XV.

THE PHILADELPHIA MEDICAL TIMES, with this issue, begins a new volume. During its fourteen years of continuous publication it has achieved a success which is substantial and real, and established a bond of unity with the profession that enables its management to speak with reasonable assurance as regards its future. The progress that has been already made, it is believed, represents a permanent gain, and from the present advanced standard we expect to triangulate forward, as Dr. Holmes happily puts it, over fields yet to be occupied, and thus acquire new elements of value. The reviews of progress in various departments of medicine, introduced last year, have been well received by our readers, and will be continued; the correspondence, both domestic and foreign, will be extended, and prompt attention will be given to current events in medical circles and medical societies.

The fact that contributors to the *Times* are remunerated for their articles by the publishers at the highest rates paid by medical journals enables the editor to make a selection, and to accept those only which are deemed most valuable. In this respect the volume published during the last year, certainly, compares favorably with other volumes which have gone before.

Finally, the action of the publishers in reducing the subscription to one-half the price of last year deserves especial mention, as we think it will tend to increase the popularity of the *Times* and extend its influence with the profession.

The *Times* being a bi-weekly, it is enabled to record the progress of medical art with more deliberation and discernment than if it possessed a more ephemeral character. In conclusion, we ask the attention of our readers to the literary as well as the scientific merit of its contents, and to the mechanical execution and press-work, which will be always kept at the highest attainable standard.

MYCOLOGY IN OLD CLOTHES.

TRUTH is universal, and the language in which it is clothed is an accident of time and place. Hence literature abounds in thoughts so alike and expressed in terms so similar that it sometimes seems literally true that there is no new thing under the sun. Even the latest work of science, in fields wide and strange as any that knowledge yet has reached, often finds some suggestion in the writings of antiquity so apt that it seems like the forgotten record of old truths that are new only to us.

The Greek historian Eratosthenes (275–194 B.C.), according to Strabo (66 B.C.–24 A.D.), held with the Homeric school that the three continents of the Old World constituted a connected island, around which flowed the great sea, Oceanus. But he added in his account that there was doubtless another great world-island, or even several, in the farthest regions of the earth. To this Strabo adds that if this indeed were the case the creatures found in such new worlds would be different from those in the old. When we reflect upon these statements in connection with the discovery of the American and Australian continents, they seem indeed prophetic. Prophecy has many a time gone wider of the mark.

Not less remarkable is a passage that occurs in the writings of M. Terentius Varro (116–27 B.C.). This writer, described as encyclopædic and prolific, contributed much to an exact knowledge of Italy, his native land. In the first of his

three books "De Re Rustica" is to be found the following modern view in an ancient garb: "Si qua erunt loca palustria crescunt animalia quædam minuta, quæ non possunt oculi consequi, et per aëra intus in corpus per os et nares perveniunt atque efficiunt difficiles morbos." Who does not recognize in this description the Bacillus malariæ? Dr. Kotelmann, of Hamburg, to whose erudition the citation of this passage at the present time is due, points out the curious correspondence between it and modern doctrines based upon the most recent work.

That *difficiles morbos* refers to malarial fevers may be well assumed, since they not only now form but have formed throughout historical times the most common and severe diseases of Italy. To the wide extension of these diseases bear witness the many recently-discovered drainage-systems, the object of which, as has been shown by Secchi, Tucci, and Tommasi-Crudeli, was to relieve the land of this scourge.

The *animalia* is a discrepancy less wide than it at first appears. It is not so long a time since the schizomycetes were regarded, on the authority of Ehrenberg and Dujardin, as animal organisms and classed as vibriones with the Infusoria. For the first time in 1853 were they recognized by Cohn as plant-forms, and referred to the Algæ; later Nägeli classified them with the Fungi as "spaltpilze."

Aside from this point of difference between the modern view and that of Varro, the description is marvellously accurate. The disease-exciting organisms are too small to be seen by the eye,—microscopic, as we say; they are in swampy places, where they develop under the favorable conditions of moisture and heat, and rather in the moist earth itself than in the water; from the surface of such earth, so soon as it is dried by summer heat, and thus exposed, they are wafted into the air; they gain access to the body chiefly by the organs of respiration; finally, they are the occasion of affections that may well be termed *difficiles morbos*. High temperature, splenic enlargement, with pigmentation of its substance, enormous development of malarial bacilli in the blood, spleen, and marrow, have followed the artificial infection of guinea-pigs by Klebs and Tommasi-Crudeli, a description that corresponds in all respects to the disease produced by natural infection in the human being, where the organisms *per aëra intus in corpus per os et nares perveniunt atque efficiunt difficiles morbos*. For Marchiafava found the malarial bacilli in the spleen and marrow of three cases of pernicious fever, and the same author—and, after him, Cuboni, Marchand, Rozaheggi, and Ziehl—found in the blood of ague-patients bacilli seemingly identical with those of Klebs.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THIS is the holiday season, and little is going on in medicine, beyond the necessary attention to the sick and dying, for Death wields his scythe irrespective of seasons and convenience. In many instances a difficulty has been experienced in finding a consultant in cases of emergency; and it seems to me that it would be no bad thing to have a list somewhere of who are in town and who are out, for such emergencies; only, where could it be kept? Then, again, whose names should appear, and, what is more, whose names should *not* appear? There are certain difficulties in the way of such an arrangement, but they are difficulties which could be got over if approached in a spirit of earnestness and honesty. Why should not a list be hung up at the Colleges of which public notice could be given, so that the practitioner in attendance upon any case could direct the messenger where to go in order to get the required information? This would not be advertising any one's name, because it would not be bringing names before the public, but only informing the public where to go to see who is in town at any particular time. If it were known that such lists existed and where they could be seen and consulted, much inconvenience could be avoided without injury or detriment to any one. Such a scheme is

practicable without any charge of advertising being brought against those whose names appear. Some heart-burnings there would be, doubtless; but it would not be impossible to draw a line. At the College of Surgeons it could be drawn at the Fellows, and at the College of Physicians at the Fellows and members. If a man is not in request on other accounts, the appearance of his name on the list would do neither him nor any one else good or harm. That something of this kind must be instituted ere long is as certain as that sickness does not strictly follow the season and avoid the holiday. It is very awkward for a general practitioner in attendance upon a grave case, perhaps a really important life, not to be able to find a consultant when a consultation becomes desirable. A friend of the patient is sent into town, and wanders about here and there till he finds some one to take out with him, perhaps some one who is far from what is desired, while, likely enough, a man possessed of the knowledge requisite to the proper understanding of the case is at home, only the messenger knew not where to find him, even if he knew of him at all. If such lists were kept at the Colleges, the practitioner could write up to the porter to ask if certain men were in town, and, if not, if certain other men were at hand. There could be no objection to such an arrangement, which would be of infinite service to the public, unless it were raised by some interested persons. A well-known consultant goes out of town and leaves directions that any patients who call shall be sent on to certain *protégés* of his, if necessary. But it is by no means a necessary sequence that his selection is also that of the patient, who very probably would prefer some one else. But to wander about London, calling first at one door and then at another in vain, seeking a consultant, is scarcely an attractive prospect for a person out of health. Nor is to write to ask several men if they are at home much better, when likely enough the letter will form one of a weekly batch sent off to North Wales or the Border. Men's names are known in connection with certain classes of maladies, and it would not be a practical difficulty for a general practitioner to ascertain which of them were available in an emergency where their counsel would be of service to him and his patient, if such lists were kept. The reader may possibly experience a difficulty about the line I draw at the College of Surgeons as compared to that at the College of Physicians, and, in order to make all plain to him, it may be well to explain the respective positions at the two Colleges. The membership of the College of Surgeons is the examination for entering the profession, corresponding to the licentiateship of the College of Physicians. The next step is an examination of a higher order, for the Fellowship of the College of Surgeons or the membership of the College of Physicians, and a good sound examination it is in each case. This examination passed, the surgeon takes his permanent position as a Fellow of his College, and is eligible for a hospital appointment. But with the physician he becomes only a member, which puts him on the list of consultants: there is a further step, and he may be promoted to be a Fellow of his College, on what terms no one seems to know, beyond that he must gain the support of eleven out of the fifteen electors, and how their choice is guided is a profound mystery. It is not inspired by heaven; that is pretty evident! What is requisite to gain a man the support of these eleven electors has never transpired or been made public. Out of these Fellows the lecturers before the College, the examiners, etc., are chosen, and to be merely a member is to stand out in the cold as regards the perquisites of the College. But the Fellows of the College of Physicians are a select body, albeit so mysteriously elected. A curious illustration of this is furnished by the post-office directory. In this the Fellows are indicated by a star (*), the members by a dagger (†), and the licentiates by a double dagger (‡), so that the public shall know beyond the possibility of doubt or cavil who are the men honored by the College. By what underhand proceedings, by what "ways that are dark and tricks that are vain," this classification was engineered, it is not possible to say. Whether the audacity or the impertinence of the classification is the more remarkable, transcends the judgment of ordinary minds. If it is desirable to draw such distinctions between the lower and higher divisions in the case of physicians, why, in the name of common sense, is it not extended to the surgeons? On the other hand, if surgeons are not to be marked off into higher and lower strata, the division-line being a very stiff examination, why should physicians of the higher class be marked off when the division-line is not a solid examination, but a shadowy semblance of a boundary, founded on nothing more substantial than caprice or favoritism? The utter absurdity of the thing as it at present stands is obvious to any one who takes the trouble to examine into the matter. It is pretty certain that the publishers of the Directory must have been induced by some Fellow of the College of Physicians to make the distinction; and possibly the tempter hoped by such action to give himself and his co-Fellows a boost in public opinion. The inconsistency of the whole thing is absurd, and the distinction is so ridiculous that the wonder is that the College of Physicians does not request the publishers to remove these *indicia*. It certainly would if it had any respect for itself. The incident is a funny illustration of what a dignified (?) corporate body can stoop to, on the one hand, and, on the other, a curious instance of how some man has planned a microscopic device to give

some men a lift at the expense of others. It cannot be a surprise to any one that the position of the medical profession here is not what it really ought to be, when it can so utterly forget its duty to itself and its self-respect. There are some very indifferent traditions in the profession, which, instead of being forgotten, as they should be, are still lived up to by those who ought to be ashamed of them.

To turn to another topic, of a different character, the necessity for a more thorough understanding of digestion, its disturbances, and the means to be adopted where the digestive system is very much impaired as to its functional activity, is borne in upon one by the lessons of daily practice. Not only in conditions of acute disease, where the digestion is almost annihilated, but in some very pronounced cases of more chronic character, the subject of feeding the patient is one of paramount importance. Milk is our sheet-anchor, doubtless, but, unfortunately, milk is distasteful to many persons, while it is apt in certain cases to curdle so firmly in the stomach that the curd never falls to pieces again until voided per anum, in consequence of which it is worthless as a food, while the firm curd is a source of irritation to the bowels, setting up diarrhœa, and in cases of enteric fever even endangering the patient's life, by the possibility of tearing the bowels at some spot weakened by ulceration. Not even where the precaution is taken of mixing it with an alkali, as Seltzer water, or Vichy, or Vals water, can this risk be entirely obviated. At the London Fever Hospital, in order to avoid too firm curdling, and the consequential dangers thereof, some farinaceous material is added to the milk, so that the curd will not be too firm for subsequent disintegration. What is often wanted is something which will sit easily upon the stomach (for if it do not it is soon rejected by vomiting) and at the same time require but a minimum of the digestive act. This last is of cardinal importance. Such a food should contain material readily convertible into grape-sugar, a certain proportion of albuminoids, and some fat. Milk, with baked flour, comes nearly to this standard. By the act of baking, starch is advanced on its way to grape-sugar. Crusts of bread, the well-baked outer portion of the loaf, soaked in hot water and mixed with milk, present a form of starch requiring little saliva to complete its conversion into grape-sugar. The different "baby-foods," too, present great advantages as food for those who are either pronouncedly dyspeptic or whose digestion is partly impaired by acute disease. Where fluid food alone can be taken, the contact with the salivary diastase is too brief to be of much service, and unless the starchy materials have had some previous acquaintance with diastase they will in all probability be voided per anum unchanged. Probably in acute disease little diastase is formed, whether salivary or pancreatic. Be that as it may, it is well to be upon the safe side, by giving as food farinaceous material which has already been acted upon by diastase. Such a food is malt-extract, under whatever name it is sold. A good malt-extract is a valuable food,—a costly food, doubtless, but a food of priceless value at times of emergency. We are accustomed to look at malt-extracts too purely from their diastatic point of view,—*i.e.*, as artificial digesters of starch by their free diastase. But they possess a value beyond that, which is scarcely sufficiently recognized. Even where the diastase has been to a large extent killed by careless preparation, there remain the albuminoids in soluble form, the phosphates in like form, and so much maltose or digested starch. Consequently, a malt-extract is a very valuable food, and, what is more, is a food which sits well upon the stomach in almost all instances. Indeed, in a very bad case, seen some months ago, the medical man in attendance upon the case had tried every food which the patient could tolerate, except malt-extract, and the only thing left for me to suggest was that a teaspoonful of malt-extract be given every hour. This was done, the stomach did not resent the presence of so small a bulk, and after a fortnight other food could be taken, and soon the patient got quite well.

In another case, a like quantity of the Cremor Hordeatus (Loefflund's Alpine Cream preserved with malt-extract) gave most desirable results. In fact, in very grave gastric cases malt-extract is a food which may often be resorted to when almost at one's wit's end what to do. This food can be taken either alone, or mixed with milk or with Seltzer water, as the patient pleases, and can either form part of a meal or be taken betwixt meals, or it can be added to beef-tea or chicken-broth. Such meat-tea alone has a very small food-value, but the addition of baked flour or malt-extract makes a mighty difference, and the combination constitutes a capital food. In cases of phthisis where the digestion is upset and there is a palpable danger of the patient sinking from inanition, such food is indicated, and is usually well borne. It may alternate with milk with advantage. It must be borne in mind that just as a variety of food is craved for by people in health, so some variety is relished by the dyspeptic. Milk, with Seltzer water, may precede some beef-tea with baked flour, and that again be followed by some compound food containing maltose, with milk. Murdock's Liquid Food is said to agree well with an irritable stomach, but I have no personal experience to offer on the subject. Then some stewed fruit may be given in such cases where it agrees with the patient. But cane-sugar is very apt to undergo acetous fermentation in the stomach, and so give rise to much acidity, and hence is contra-indicated in many cases.

But, where it can be taken, the juice of stewed fruit makes a pleasant change; though, unfortunately, this is not often the case. More frequently the changes must be rung on milk and malt-preparations. Maltose differs widely from cane-sugar in the liability of undergoing acetous fermentation in the stomach, rarely, if ever, undergoing that change. This is another argument in favor of malt-extracts for invalids. Indeed, there seems a great prospect before us, in a very troublesome class of cases, of being able to surmount the difficulty in feeding the patient by means of the skill of the chemist. Of course there is another matter to be attended to, which is not unimportant, and this is, that, as only a small bulk of food can be taken at once, it is necessary, in order to provide the patient with a sufficiency of nourishment, that these little meals should be taken at frequent intervals. About one-third of a pint, at once, every two hours, is enough to start with, and as the stomach gains power the quantity can be increased. But, as variety is pleasant to all, a little white fish boiled may be added to the "baby-foods" after a certain amount of improvement has been attained. It is as well, however, to remember the old proverb, "the more haste the less speed;" for never is the truth of the adage more forcibly illustrated than in the case of dyspepsia, where precipitancy and anxiety to get on very commonly defeat their own aim. A little bismuth with soda and nux vomica is a good combination, so far as medicines are concerned, to commence with. But ipecacuanha is the drug *par excellence* when it can be borne. That this is an hepatic stimulant of no mean power is now generally admitted. It is notorious that in full doses ipecacuanha is an emetic. In smaller doses it increases the activity of the gastric secretion while stimulating the muscular fibres of the stomach. Consequently, it is a drug of great potency in cases of deficient power in the digestive organs; and, as a pill, two-thirds of a grain of ipecacuanha, with a dose of strychnia, a little black pepper in extract of gentian, or aloes and myrrh pill, or compound colocynth pill, according to the state of the bowels, is in constant use with me in cases of indigestion. By it before meals, and McKesson & Robbins's egg-shaped pepsin pills after, the number being regulated by the patient's necessities, and a suitable regimen, ordinary cases of indigestion can be made to move on satisfactorily. But there is a lower stratum than this,—viz., a class of cases where only the most easily digested foods can be taken at all; where the stomach cannot be bullied, and where compromise alone is practicable. In these very troublesome cases "baby-foods" are our sheet-anchor to start with. And even when something approaching an ordinary meal can be taken in small quantities, a glass of milk with some good malt-extract in it—about two hours after the meal, when the contents of the stomach are passing the pyloric ring—is a good addition to it. The increasing failure of digestive power of the present day calls into action the skill of the chemist; and, fortunately for dyspeptics, the chemist possesses the skill.

J. Milner Fothergill.

PROCEEDINGS OF SOCIETIES.

LEHIGH VALLEY MEDICAL ASSOCIATION.

This flourishing young Society held its fourth annual session at Mauch Chunk on Tuesday, August 19. There were present of the Association, including those elected at this meeting, sixty members. Besides, there were some forty others, who, with wives and daughters, made the grand gathering number nearly two hundred.

The principal session was held in Concert Hall in the morning, and during this session the ladies were exploring the recesses of Glen Onoko.

The Association was called to order by its President, Dr. R. Leonard, of Mauch Chunk, who, after the roll-call, delivered the President's Address of Welcome. He selected as his topic "Some of the Obstacles and Difficulties in the Way of the Scientific Practice of Medicine: more especially in Country Practice." This address well merited the close attention it received: it was true to the life. He classified the difficulties under—1, a want of care in nursing; 2, ignorance of the really "professional" nurse (professional because they profess); 3, the general ignorance of the average man of his own physical make-up; and, 4, the worst foe,—those in our own ranks or who borrow our name for their own individual ends.

At the conclusion of the address, most of the business was transacted, and then the audience was delighted with Prof. Parvin's paper on the "Tampon." (See page 8.)

The only thing to mar the address was the approach of the dinner-hour, causing the lecturer to hasten. The heartiness with which the vote was given to thank Prof. Parvin for his address, and again to make him an honorary member of the Association, was an evidence of the appreciation of the Association.

After dinner, the Association and guests took cars for a trip around the Switchback. A short session was held at Summit Hill, to receive and act upon the report of the Nominating Committee.

Dr. Joseph Thomas, of Quakertown, was elected President, and Dr. Charles McIntire, of Easton, was re-elected Secretary.

The Carbon County Society furnished a refreshing collation, and the cars were taken back to Mauch Chunk, by gravity. A handshaking, good-byes, and embarking on the trains brought the session to an end. C. M.

REVIEWS AND BOOK NOTICES.

ATLAS OF FEMALE PELVIC ANATOMY. By D. BERRY HART, M.D., F.R.C.P.E., Lecturer on Midwifery, School of Medicine, Edinburgh, etc. New York, D. Appleton & Co., 1884. 4to, cloth.

This beautifully-printed atlas consists of thirty-seven full-page quarto plates and accompanying letter-press, not only illustrating the various elements constituting the female pelvic anatomy in a normal condition, with numerous dissections, but also showing various displacements caused by posture, pressure, or pregnancy. The illustrations are fine specimens of lithographic work in colors, except the microscopic reproductions, which are apparently by the heliotype process. There are also a number of wood-cuts given in an appendix in explanation of some points in the physics of the bladder and rectum.

Dr. Hart needs no introduction to American readers of gynæcological literature: it is, therefore, especially gratifying that this magnificent work was published in this country and under the direct supervision of Dr. Alexander J. C. Skene, of New York.

A study of these plates—many of which were original and are beautifully executed, every care having been exercised to obtain accurate representations from nature, others being from well-known monographs—will serve in a measure to correct some of the crude and imperfect knowledge of the relations of the pelvic viscera which has grown out of the errors of the popular text-books and led to confusion of ideas as to the pathology of many disorders of the organs involved, and no little discussion as to their diagnosis and proper treatment. We advise those interested in the diseases of women to examine this book for themselves.

THE THEORY AND PRACTICE OF MEDICINE. By FREDERICK T. ROBERTS, M.D., etc. With Illustrations. Fifth American Edition. Philadelphia, P. Blakiston, Son & Co., 1884. pp. 1008, 8vo.

Compared with the previous edition issued four years ago, the text of the present shows on nearly every page evidences of careful, intelligent revision. There is a full appreciation of, and due consideration given to, the many additions to modern pathology and therapeutics which have been made in that time. It is characterized by clearness of style, directness of expression, correctness as to its teachings, and brevity without dogmatism. The numerous additions, which would have otherwise materially increased the size of the work, have been provided for by a slight reduction in the size of the type; and the change from two volumes to one makes the work rather more acceptable to American readers, on account of the greater convenience for reference. The present edition fully maintains the standard of a work for the merits of which we entertain a high opinion as a most useful, correct, and practical work on the practice of medicine for the student either before or after graduation.

GLEANINGS FROM EXCHANGES.

THE NEOPLASTIC DIATHESIS.—M. Verneuil, in an address delivered before the International Medical Congress, said that he desired to prove: (1) that all true neoplasms, by the identity of their constitutional origin and their primary causes, make up a natural pathological group; (2) that they grow by virtue of a special disposition of a particular morbid disposition,—in a word, of a diathesis which he calls neoplastic; (3) that this diathesis is neither original nor independent, but derived from a much more general constitutional derangement,—arthritism. This led him to say that the true neoplasm is an arthritic manifestation of the same type with biliary gravel, eczema, rheumatism, gout, etc. He explained at length these three propositions, commencing by a general review of neoplasia and its varieties, as well as of the different neoplasms. Among these last he retained only those which he called idiopathic or true, and after setting forth their anatomical, physiological, clinical, and etiological characters, he arrived, by summarizing these characters, at the following definition. A true neoplasm is an accidental organ, definite, superfluous, and harmful, formed by the hyperplasia of anatomical elements and tissues morphologically and chemically altered,—an organ which is the seat of a perverted and disordered nutrition and a local manifestation of a particular diathesis, having its root in the arthritic dyscrasia. This definition has as its object the definite constitution of the group of neoplasms, too often confused with that of tumors. In the second part of his address, M. Verneuil drew attention to the fact that the etiology of neoplasms was imperfectly known and not sufficiently studied. He criticised the etiology at present accepted, and, in particular, the abuse which has been made of the word diathesis. He admitted but one diathesis for all neoplasms, at all ages, and in all conditions. This diathesis he believed to be hereditary. When it existed in a family, it could transmit itself to the descendants under a like or a different form. The oneness of the diathesis was proved, further, by the multiplicity and the diversity of the neoplasms in the same subject at one and the same time, or at different periods of life, by the multiplicity of pathological tissues in one and the same tumor, by the substitution of one form of neoplasm by another at the same spot. He examined, with the view of refuting them, the objections to the oneness of the diathesis,

based on the differences of structure, of the course, and the gravity of the different neoplasms. He further laid it down that, if the ordinary causes cannot give rise to a neoplasm without the neoplastic diathesis, this in turn is powerless to produce anything of itself, and without the aid of the requisite causes. In the third part of his address, M. Verneuil, recognizing that the admission of a diathesis does not determine the question of etiology, set himself to prove that the neoplastic diathesis springs directly from arthritism, an idea already introduced to science by Bazin, but so far imperfectly demonstrated. He brought in as arguments supporting it the association, or the almost constant association, of neoplasms and arthritic manifestations, and, at the same time, the extreme rarity and almost incompatibility of these same neoplasms with scrofula, itself far removed from arthritism. Professor Verneuil, in concluding, said he did not conceal from himself the fact that his ideas presented a broad side to criticism, and that he must, to have them accepted, keep up facts and proofs. He had not, however, hesitated in laying them before the Congress, in the hope that they would give rise to both discussion and observation, and would contribute, by the study of etiology, to raise practice out of the pure surgical path, in which at present it was exclusively occupied.—*British Medical Journal.*

The Etiology of Tuberculosis.—With a view to prove the exact relationship of tubercle to the bacilli with which it is associated, further investigations have lately been carried on by Koch, and he lays down the following statements:

The bacilli are always found in greatest abundance in those tissues where the tuberculous process is most active, whilst, when the caseous masses appear, the bacilli disappear, and assume a spore-like condition, in which they cannot easily be stained, and are therefore easily overlooked. In all the slower tuberculous processes, *e.g.*, those which are observed in joints, the bacilli are only found in the giant cells, and often one bacillus only is present in each giant cell. These giant cells are produced from simple cells by the irritation of the bacillus. If the process is a very rapid one, it does not end in caseation, but in the shrivelling up of the cell, and injection of the neighboring connective tissues.

In scrofulous lymphatic glands, and in joint and bone affections, if the bacilli are found at all they are very rare. This is also the case with lupoid affections. In some cases forty or fifty sections will reveal only one bacillus.

When these various tuberculous deposits were employed for injection purposes the same result was produced in animals of the same species and variety. Even the slightest variety in an animal gave a variety in the result: *e.g.*, whilst the field-mouse was very susceptible to inoculation, the white mouse was not.

Sometimes the same animal at different times showed a varying susceptibility; and this result Koch is inclined to ascribe not so much to variety in the infective material as to the resisting power of the individual. (*Mittheil. aus dem kaiserl. Gesundheitsamte*, vol. ii., Berlin, 1884.)—*Practitioner.*

The Color of Cannabis Indica.—It having been asserted by Dr. Maclagan that the green color of the extract of cannabis indica is due solely to the presence of copper, Dr. Squibb has made a series of experiments which prove that it is due originally to chlorophyll, and that a fluid extract could be made without a trace of copper, although a trace could be detected in commercial specimens in the proportion of 1 to 3700 parts, therefore in a quantity too small to do harm. In future this accidental impurity will be avoided by Dr. Squibb by the substitution of glass for copper vessels in making the extract.

Cholera-Germs.—Drs. Maurin and Lange, who have been working at Marseilles since the departure of Koch, claim that they have discovered the missing link in the propagation of the cholera-bacillus, in the shape of a mucor which appears on the fourth or fifth day on putrefying cholera-stools, and on these only. It has the form of a mycelium with cup-shaped sporangia, which burst on the slightest agitation, discharging vast quantities of spores, which, after deposit upon putrid organic matter, develop into an anaerobium, which they believe to be the immediate cause of cholera, and which in turn sporifying produces the bacilli of Koch.—*British Medical Journal*, September 6.

Sulphocarbolate of Zinc, says the *Riv. Ital. di Terap.*, is a valuable disinfecting material, whose good qualities, though long known, have been passed over in favor of less active agents. Bottini has recently been experimenting with it, and warmly recommends its use in antiseptic surgery. A five-per-cent. solution is quite strong enough, and it may be used in the form of spray or applied by compresses, etc. It is also useful for the disinfection of knives and other instruments.—*National Druggist.*

MISCELLANY.

An English Cholera Commission.—The English government having directed Dr. Klein and Dr. Heneage Gibbes to go to India to pursue a scientific inquiry into the nature of cholera, they have sailed for the scene of their labor. It is understood that these gentlemen will act in conjunction with the commission nominated a few weeks ago by

the Indian government for the same object.

A WARNING TO BATHERS IN THE SCHUYLKILL.—A boy who was recently bathing in the river Medlock, in Manchester, got out of his depth and swallowed some of the water, which was particularly filthy. Though immediately rescued by another lad, he expired shortly afterwards, death, it is stated, resulting not from drowning, but from poisoning.—*Lancet.*

A MEDICAL COLLEGE SUED.—Suit has been entered against the Georgia Eclectic Medical College of this city for fifteen thousand dollars. It is alleged that the Faculty violated the State law by graduating students who had not attended two full courses of lectures.—*Atlanta Medical and Surgical Journal.*

WE learn from the daily press that some friends of Dr. J. V. Shoemaker, of this city, gave him a dinner at the St George Hotel on Saturday night, the 20th of September, to welcome him on his return from Europe.

THE AMERICAN PUBLIC HEALTH ASSOCIATION holds its annual session this month, in St. Louis, Missouri, commencing on the 14th and ending on the 17th, at which A. L. Gihon, M.D., U.S.N., will preside. A large and interesting meeting is expected.

THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE held a very successful session in this city last month, which was honored by the presence of a large number of visitors from the British Association. The official report of the proceedings of the meeting will appear in *Science.*

JUDGE ELCOCK recently decided that the Act of Assembly with regard to the sale of poisons does not apply to physicians' prescriptions, and the clerk of Mr. McKelway was very properly discharged from custody for not labelling a box of pills "Poison," although, being taken in excess of the amount directed to be administered, they caused the death of a young girl.

DRS. PROTHERO AND HEYWOOD SMITH, distinguished gynæcologists of London, father and son, who have been visiting the city, were entertained at lunch by Dr. Albert H. Smith on the 20th ult., and met a number of invited guests.

NOTES AND QUERIES.

WOMEN STUDENTS IN VIENNA.

TO THE EDITOR OF THE PHILADELPHIA MEDICAL TIMES:

DEAR SIR,—It seems very true of each one of us that, as we go through the world, we find that which we seek, and fail to see that which does not interest us.

Being a woman, and having spent a year in study at Vienna, I would like to supplement the "Letter from Vienna" contained in your number of July 26 by giving you a short sketch of the medical work women are enabled to do in the "Allgemeines Krankenhaus."

The chief attraction for foreign students is the series of private classes for diagnosis and practical work in the hospital wards, taught by the assistants and docents. To these classes only those can be admitted of whom the professor of the department approves. It is necessary for a woman coming to Vienna for study to be able to show a diploma of graduation from a recognized medical school at home, and, as a rule, to meet the professor of the department personally. With his approval, she then enters the same classes with the men.

During the past year twelve women (English and American physicians) have taken courses in the hospital: four Englishwomen, one a graduate of the London University and three from the King's and Queen's College of Physicians in Ireland. The remainder were Americans, and graduates of the medical schools in Boston, Philadelphia, Chicago, and San Francisco.

Two American women who are at present in Vienna are recent graduates of the Paris "École de Médecine," which admits women as matriculates and enables them to take the same courses, pass the same examinations, and confers upon them the same diplomas men receive. A Roumanian lady, a graduate of this school, has also recently gone to Vienna for study.

The professors and assistants whom we have met during the past year have treated us most courteously, and we have enjoyed privileges for study in the same classes with the men in the clinics, wards, and laboratories of Professors Billroth, Kundrat, Kaposi, Nothnagel, Schrötter, Stellwag, Wiederhofer, Bamberger, Politzer, Salzer, and Exner.

Three large sections of the hospital, belonging respectively to Professors Carl Braun, Gustav Braun, and Späth, consist of the lying-in wards. These are open in turn, each for twenty-four hours, for the reception of women in labor. Ten thousand births take place here every year.

Prof. Gustav Braun has the department for the training of the midwives under his charge. (Prof. Späth has not been connected with this branch of the work for at least ten years.)

Professors Carl Braun and Späth do not admit women-physicians to their lying-in wards, although Prof. Späth gave his own card to one of our ladies, introducing her to his assistant, Dr. Lumpey, with whom she desired to obtain work in gynæcology.

Women-physicians enjoy greater facilities for obstetrical work than they could obtain in the wards of either of the above professors, by taking the private courses in the wards belonging to Professor Gustav Braun, which do not admit men. These consist in a "touch course" (the examination of pregnant women), an operative course on the phantom, and a series of obstetrical operations, versions, breech deliveries, forceps deliveries, etc., on the living in the lying-in wards. The midwives take charge of normal labors alone, and have special lectures and demonstrations from Prof. Gustav Braun. Any woman-physician desiring to study the phases of labor in a number of cases, and willing to enter upon the drudgery it entails, has the privilege of entering the school for midwives. This does not exclude her, however, from the physician's course. One of our number, desiring to give special attention to the subject, took both courses at the same time during the past year.

I am surprised that Dr. Wilson's memory should have failed him on these points, as I know he must have learned them from the four women-physicians who boarded at the same *pension* with himself in Vienna.

In a letter which I had occasion to write Dr. Wilson during his short stay in Vienna, I spoke of our inability to enter certain courses at the time. I had reference then to courses in gynæcology, most particularly a touch and operative course given by Dr. Pawlik, docent in Prof. Bamberger's clinic. Since Dr. Wilson left Vienna, this course has also been opened to women, a lady from Winchester, Massachusetts, having taken it during June and July. I myself had the privilege of visiting his clinic, and the promise of a place in his next class (he admits only four at a time) could I wait until October. Two American women have their names already put down by him for that course.

Dr. Lott, also a privat-docent of the university, has given four women an operative course in gynæcology during this summer: so that I know of no branch of the work now in which women do not enjoy equal advantages with the men.

Dr. Wilson will pardon me for making this correction, as I felt in part responsible for his misunderstanding. In one of his letters to me he states that he considers the movement for the medical education of women as requiring "active measures for suppression." This feeling has, I fear, led him to do us this injustice in not presenting the true facts of the case. Had he said we could not matriculate in the Vienna University and take the lectures with the students and the university examinations, he would have been correct (an institution which does not offer a medical education to the women of its own country cannot be expected to do that for

foreigners); but to say that we "have failed to gain any recognition in Vienna" is a grave error, to which not only the women studying there, but the professors and assistants, can testify.

ANNA M. FULLERTON.

PARIS, August 23, 1884.

[From a letter of Dr. Carl Breus, privat-docent in the University of Vienna, and recently assistant to Prof. Gustav Braun, written August 28, 1884, we take the following upon the same topic, confirming Dr. Fullerton's statements.—ED. MED. TIMES.]

"Dr. Anna M. Fullerton has recently shown me a letter from Vienna in the *Philadelphia Medical Times* of July 26 of this year, and requested me to write to you.

"What is said in said journal about the position of women-physicians with the faculty of Vienna is in point of fact incorrect. The *legal matriculation* of women for medical study in Vienna, it is true, is not permitted; but most of the professors afford to women-physicians from abroad an entrance to the institutions which they teach *as guests*, precisely as they do to the men-physicians.

"The courses of most of the assistants and docents stand open for women, and are resorted to by them. I myself have repeatedly taught operative obstetrics in courses for women-physicians as assistant in the clinic of Prof. Gustav Braun, covering all the ground proper for the instruction of physicians, and not merely such as would be given for midwives. On the whole, the women-physicians who visit the clinic of Prof. Gustav Braun have there the full rights of doctors, and stand entirely apart from the midwives, who are separately taught.

"They are allowed, under my supervision, to perform for themselves the difficult operations on women in labor, which are in no case whatever permitted to the midwives, who are never allowed to make even an episiotomy.

"At the clinic of Profs. Carl Braun and Späth women-physicians are not admitted; but at the clinic of Prof. Gustav Braun women have the opportunity of acquiring all practical and theoretical obstetrics. For these facilities they are to be envied on account of the less abundant amount of material divided among the frequenters of both the other clinics."

[These communications were shown to Dr. Wilson, who writes as follows:]

MR. EDITOR:

DEAR SIR,—In reply to the above, I would simply state that I disclaim any intention whatever either to suppress or exaggerate the facts: I merely presented them to your readers as they appeared to me while recently in Vienna.

Truly yours,

CHARLES MEIGS WILSON, M.D.

1517 WALNUT STREET, PHILADELPHIA.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 14, 1884, *TO SEPTEMBER* 27, 1884.

CALDWELL, D. G., MAJOR AND SURGEON.—Granted leave of absence for one month and twenty days, to commence about October 15, 1884. S. O. 95, Headquarters Division of the Missouri, August 16, 1884.

MIDDLETON, PASSMORE, MAJOR AND SURGEON.—Having reported from sick leave of absence, assigned to duty at Fort Leavenworth, Kansas. Paragraph 2, S. O. 188, Headquarters Department of the Missouri, September 19, 1884.

CRONKHITE, HENRY M., CAPTAIN AND ASSISTANT-SURGEON.—From Department of the Platte to Department of the Missouri.

TAYLOR, ARTHUR W., LIEUTENANT AND ASSISTANT-SURGEON.—From Department of the Missouri to Department of the Platte. Paragraph 1, S. O. 215, A. G. O., September 13, 1884.

WHITE, R. H., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Fort Winfield Scott, California, relieving Assistant-Surgeon A. S. Polhemus, who, upon being relieved, will report to the commanding officer, Alcatraz Island, California, for duty. Paragraph 1, S. O. 113, Headquarters Department of California, September 19, 1884.

HALL, JOHN D., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Townsend, Washington Territory, to relieve Surgeon R. S. Vickery.

Surgeon Vickery, on being relieved, directed to report to commanding officer, Vancouver Barracks, Washington Territory, for duty. Paragraph 3, S. O. 140, Headquarters Department of Colorado, September 15, 1884.

WILSON, WILLIAM J., CAPTAIN AND ASSISTANT-SURGEON. From Department of Dakota to Department of the East.

GARDINER, J. DE B. W., CAPTAIN AND ASSISTANT-SURGEON.—From Department of Arizona to Department of the East.

CORBUSIER, WILLIAM H., CAPTAIN AND ASSISTANT-SURGEON.—From Department of the East to Department of Arizona.

LA GARDE, L. A., CAPTAIN AND ASSISTANT-SURGEON.—From Department of Missouri to Department of Dakota. Paragraph 1, S. O. 220, A. G. O., September 19, 1884.

TESSON, L. S., CAPTAIN AND ASSISTANT-SURGEON.—Directed to report to commanding officer, Fort Stockton, Texas, for temporary duty. Paragraph 3, S. O. 127, Headquarters Department of Texas, September 22, 1884.

BIRMINGHAM, H. P., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended twenty days. Paragraph 2, S. O. 116, Headquarters Division of the Missouri, September 22, 1884.

MADDOX, T. J. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Directed to report to commanding officer, post of San Antonio, Texas, for duty. Paragraph 5, S. O. 127, Headquarters Department of Texas, September 22, 1884.

BARROWS, C. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted one month's leave of absence, with permission to apply to the proper authority for an extension of one month. Paragraph 4, S. O. 86, Headquarters Department of Arizona, September 13, 1884.

BARROWS, C. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended one month. Paragraph 6, S. O. 97, Headquarters Division of the Pacific, September 19, 1884.

DIETZ, W. D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Selden, New Mexico, (post-surgeon). Paragraph 4, S. O. 187, Headquarters Department of Missouri, September 18, 1884.

MCCAW, W. D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon, Fort Craig, New Mexico. Paragraph 5, S. O. 187, Headquarters Department of Missouri, September 18, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM SEPTEMBER 14, 1884, *TO SEPTEMBER* 27, 1884.

P. A. Surgeon G. E. H. HARMON, September 16, from Navy-Yard, Norfolk, to Naval Academy.

P. A. Surgeon W. A. MCCLURG, September 16, from Naval Academy to Naval Hospital, Philadelphia, Pa.

P. A. Surgeon PHILIP LEACH, September 16, from Hospital, Chelsea, Mass., to the "Palos."

Surgeon J. W. COLES, September 16, as member and recorder of Naval Examining Board, and to Hospital, Philadelphia.

P. A. Surgeon E. Z. DERR, September 16, to Navy-Yard, New York.

Surgeon B. S. MACKIE, September 16, from Training-Ship "Jamestown," as member and recorder of Naval Examining Board.

Medical Inspector D. KINDLEBERGER, September 18, from "Hartford," sick.

P. A. Surgeon S. H. DICKSON, September 19, permission to leave United States.

Medical Inspector D. BLOODGOOD, to Washington, for examination preliminary to promotion and as to qualifications for sea-duty, October 1, 1884.

Medical Director W. T. HORD, as member of Naval Examining Board, October 1, 1884.

Medical Director T. J. TURNER, as member of Naval Examining Board, October 1, 1884.

P. A. Surgeon J. C. BOYD, placed on waiting orders, September 25, 1884.

Surgeon A. S. OBERLY, to Washington, for examination preliminary to promotion and as to qualifications for sea-duty, October 1, 1884.

PHILADELPHIA, OCTOBER 18, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE CLASSIFICATION OF LARYNGEAL NEUROSES.

A Summary from Demonstrations at the New York Polyclinic.

BY LOUIS ELSBERG, M.D.,

Professor of Laryngology and Rhinology.

GENTLEMEN,—To-day I am going to redeem my promise to give you a connected account of my classification of laryngeal neuroses. This classification is one for practical purposes, and is partly physiological and partly anatomical, to facilitate analysis and understanding of the morbid conditions as they present themselves. As you know, laryngeal neuroses concern either sensation or motion, or both sensation and motion combined. During the session about to close we have had before us a number of patients illustrating the various affections to which the designation "laryngeal neuroses" is properly applied. We have excluded from that category every case in which the disorder was not what is called "functional;" *i.e.*, every case in which morbid sensation depended upon inflammatory or other structural change of the part, or in which motion was interfered with by organic or mechanical causes. With this restriction, you have seen that laryngeal disordered mobility is much more frequently met with than disordered sensibility, and that while the latter, except in certain general conditions of the system, very rarely occurs without (at least some degree of) the former, motor power over the vocal organs is often affected without interfering with normal sensation. To such motor disturbances I have given the systematic name "Laryngeal Dyskinesia;" to sensory, that of "Laryngeal Dysæsthesia."

I classify dysæsthesia (*a*) in reference to quantity or degree of sensation, as—I. Diminished sensibility, or hypæsthesia, and II. Increased sensibility, or hyperæsthesia; and (*b*) in reference to quality or kind of sensation, as—III. Perverted sensibility, or paræsthesia.

I have abundantly demonstrated to you that we must discriminate between three different kinds of sensibility of the throat,—viz., 1, tactile, by which temperature and pressure are appreciated; 2, dolorous, by which pain is appreciated; and 3, reflex, from which result muscular contractions, as well as intravascular and secretory phenomena.

The following tabular statement comprises the classification to which I have adhered for some years, and which I find most useful for designating the affection from which patients suffer. In individual cases some of the various conditions in the list are sometimes curiously combined, or exist on opposite sides of the larynx.

I. Hypæsthesia.	1. Anæsthesia.			
	2. Analgesia (Analgia, Anodynia).			
	3. Anæsthesia dolorosa.			
	4. Tactile hypæsthesia and hypalgia.			
	5. Reflex hypæsthesia.			
II. Hyperæsthesia.	1. Tactile hyperæsthesia.			
	2. Hyperalgia (algesia, hyperalgesia).	Spontaneous.		
		From external impression.	Peripheral.	Constant.
			In nerve-trunk, or neuralgia.	Paroxysmal, or true neuralgia.
	3. Reflex hyperæsthesia.	Muscular effects.	Cough, choking, spasm, etc.	
		Circulatory effects.	Flushing, paling.	
		Secretory effects.		
III. Paræsthesia.	The perversions of sensibility are so various that it is impossible to classify them or to enumerate them all. There are, however, perversions of tactile, of dolorous, and of reflex sensibility. Among the first mentioned, the most frequent are the sensation of heat or burning (the opposite—a sense of coldness—is very rare, but I have also seen that) and the sensation of the touch of a foreign body, attention being given mainly to its shape and its weight or pressure. Patients describe all possible and impossible shapes and materials in endeavoring to give an account of the perverted sensations. I have sometimes thought most of them might be arranged under the three heads,—1, sphæræsthesia; 2, zonæsthesia, or strangalæsthesia; and 3, akanthæsthesia; comprising, under the first, the sensation of a bulky body, generally ball-shaped; under the second, a cincture or band feeling, a sense of constriction; and under the third, the sensation of a sharp-pointed body, piercing or cutting.			

For a long time I thought that just as the cases of sensory disturbance, or dysæsthesia, are classifiable under the three heads of diminished, increased, and perverted sensation,—*i.e.*, hypæsthesia, hyperæsthesia, and paræsthesia,—so the cases of motor disturbance, or dyskinesia, might be classified under the three heads of di-

minished, increased, and perverted motion; *i.e.*, hypokinesia, hyperkinesia, and parakinesia. Such a classification has been adopted by Mandl, and I formerly followed the same. But more experience has convinced me that while the cases of laryngeal hypokinesia constitute paresis and paralysis (designating for convenience by the latter term entire loss of motion, and by the former incomplete loss, but comprehending both conditions under the general term paralysis), the cases of laryngeal hyperkinesia and parakinesia cannot properly be clinically separated, or rather that morbidly increased motion in the larynx is perverted motion; *i.e.*, that all the conditions of disordered mobility not of the nature of "paralysis" can properly be classed under the head of "spasm."

I. *Paralysis.*—This may be confined to a single muscle, or may implicate several muscles, or one or more sets of muscles. It may be in the domain of either the superior or the inferior laryngeal nerve, or may involve both, and come from disease or injury of either the pneumogastric or spinal accessory nerve, or the brain: in either case it may be bilateral or unilateral, and either partial or complete. In affections of the brain the paralysis is usually not limited to the larynx, but is associated with paralysis of the pharynx, palate, tongue, etc., as in progressive bulbar paralysis, locomotor ataxy, and general paralysis. We have more than once in this Polyclinic had the opportunity to observe the very curious fact that if in injury or disease of either the brain, or the pneumogastric, spinal accessory, or recurrent nerves, laryngeal paralysis is or becomes incomplete, the abductor filaments are more prone to be affected than the adductor filaments, and that if, in a case in which both the abductors and the adductors are affected, recovery takes place, the adductors are apt to recover first or exclusively, and to be affected with abnormal contraction, so that the patient during the progress of recovery is in danger of a dyspnœa, which may necessitate tracheotomy to prevent death. The relatively greater disposition to implication of the abductor filaments has been impressed upon the profession by Dr. Felix Semon, of London.

Paralysis in the domain of the superior laryngeal nerve involves, aside from anæsthesia, loss of power of the thyro-cricoid and the thyro- (and ary-) epiglottic muscles, while paralysis in the domain of the inferior laryngeal nerve implies either adductor or abductor paralysis, or both combined. A few years ago, I pointed out as a difference between the position of the vocal bands to which we may justly apply the term *cadaveric* (uninfluenced by muscular action) and the position which results when all the muscles except those innervated by the superior laryngeal nerves are paralyzed, that in the latter case the edges of the bands are slightly concave, while in the dead body, where the real cadaveric position is seen, and in paralysis involving the thyro-cricoid, thyro-arytenoid, arytenoid, and lateral crico-arytenoid, either with or without the posterior crico-arytenoid muscles, these edges are straight or even somewhat convex. I should much like to have other observers pay attention to this point, as it as yet lacks confirmation.

In the domain of the inferior laryngeal nerve, the adductor paralysis, causing phonatory leakage, involves, either singly or combinedly, paralysis of the arytenoid, thyro-arytenoid, and lateral crico-arytenoid; while the abductor paralysis, causing respiratory insufficiency, involves paralysis of the posterior crico-arytenoid. Paralysis of the lateral crico-arytenoid muscles is very rarely isolated; usually there is combined with it paralysis of either the arytenoid or the thyro-arytenoid, or both; sometimes the two latter are affected and the former are intact, or either of the latter may be affected alone. Paralysis of the posterior crico-arytenoid muscle occurs either alone or in combination with the adductors.

II. *Spasm.*—Paralysis of laryngeal muscles sometimes is followed by, or alternates with, spasm of the same or other muscles, and sometimes it seems to cause, or at all events is accompanied by, spasm of antagonistic muscles. Sometimes spasm is a reflex effect, and sometimes it is called forth by the very action of the muscles. It is either more or less *clonic* or more or less *tonic*, in the former the muscular fibres contracting and relaxing alternately in quick succession, in the latter the contractions remaining for a comparatively long time. It may be unilateral, but usually is bilateral, and is either simple or complicated with spasm of other muscles. It may affect either the abductors or, what is more usual, the adductors, and in this case

may either involve all or be limited to one or two of the adductor muscles. Hack has pointed out that isolated spasm of the lateral crico arytenoid muscles is more dangerous to life than spasm of all the adductors combined; and I have met with cases which entirely confirm Hack's experience.

For many years I grouped cases of laryngeal spasm according to a modification of Gerhardt's classification. This thorough clinician made the following four groups:

1. Those caused by direct irritation of laryngeal nerves.

2. Reflex laryngeal spasms, mostly arising from excitation of the superior laryngeal nerve, as when the mucous membrane, especially the lower face of the vocal bands, is touched, when foreign bodies are present in the air-passages, etc.

3. Hysterical laryngeal spasms, which are also reflex, and sometimes combine with spasm of the inspiratory and expiratory muscles.

4. Functional laryngeal spasms, analogous to writer's cramp, shoemaker's cramp, etc.

As my observations accumulated, I found Gerhardt's classification, and successive modifications thereof, inadequate. I had to enlarge especially the frame of functional spasms; under this designation Gerhardt had recorded two very interesting cases of "neurosis of occupation." In describing his second case, Gerhardt says, "This was evidently a case of spasm of an organ abnormally exercised, occurring at every attempt at over-exertion." I found cases in which laryngeal adductor spasm was evoked not only by the exercise of the function of phonation, but also by that of the functions of respiration and deglutition; and while in some cases over-exertion was necessary to bring on the attack, in others the quietest and most unexcited functional action of the larynx produced it. I therefore came to arrange these cases under the heads of deglutitory, inspiratory, and expiratory (including phonatory) adductor spasm. In addition to the simple forms of these four, special mention must be made of the complicated inspiratory and expiratory forms of adductor spasm; the former is that ordinarily known as laryngismus stridulus, the latter occasions very curious coughs. These coughs have been subdivided (*a*) as to their mode into the two kinds, paroxysmal and continuing, and (*b*) as to their acoustic quality, which is often very peculiar, as barking, quacking, crowing, lowing, etc.

In abductor spasm there is insufficient closure of the rima glottidis, and of course no possibility of making a laryngeal sound.

NOTE.—Since delivering the foregoing lecture, I have presented the subject of laryngeal spasm to the American Laryngological Association; and a reviewer in the *Internationales Centralblatt für Laryngologie, Rhinologie und verwandte Wissenschaften*, criticising my classification from a report published unofficially and without my knowledge in the *Philadelphia Medical News*, regards it as very artificial, and based more upon theoretical considerations than upon observations at the sick-bed: "stark gekünstelt und mehr auf theoretischen Erörterungen, als auf Beobachtungen am Krankenbett beruhend."

It is to be hoped that with more experience this evidently young reviewer will learn better. Before concluding his review he gives evidence, also, of carelessness, not to use a harsher word,—viz.: any one with understanding of the subject, or even without understanding, with attention to the context, would have known that the phrase "*spasm of all the abductor laryngeal muscles*" is a reporter's or a typographical error, especially as that phrase occurs in speaking of a variety of adductor spasm; but, according to this reviewer, the phrase *must be interpreted as showing a mistake in regard to the number of abductors of the vocal bands proceeding from false anatomical notions!*

The esteemed editor of the *Internationales Centralblatt*, if he wants to maintain a high standard for his periodical, must be more careful in the selection of his reviewer.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
Philadelphia.

HÆMATOMA AURIS.

UNDER this title, Dr. Samuel Sexton (*N. Y. Med. Record*, July 5, August 2, 9, and 16, 1884) has written the most elaborate essay on othæmatoma in the English language. In the author's opinion, othæmatoma, or sanguineous tumor of the auricle, may be produced either by severe contusion of the auricle, or it may, as is asserted, take its origin from idiopathic causes alone. Most frequently, however, the author thinks that it is due to violence, even where a predisposition to its occurrence exists. The size of the tumor varies from that of a Lima bean to that of an egg. Its formation is usually rapid, and the sanguineous contents of the tumor, at first fluid, show a marked tendency to become clotted, and quite often, unless incised, spontaneous rupture takes place. The disease most frequently occurs in the insane. The etiology of othæmatoma in the insane has long been the subject of discussion. Bird (1834) was at a loss to account for it, and Franz Fischer (1848) concluded that the causes must ultimately be sought for in pathological states of the nervous system. Dr. Sex-

ton believes that the intense congestion of the ears sometimes witnessed in connection with great cerebral excitement in the insane cannot but suggest the possibility of spontaneous extravasation of blood beneath the perichondrium. It is also held to be probable that certain tissue-changes in the perichondrium and cartilage may induce othæmatoma. These tissue-changes seem to be mainly brought about through the agency of the nervous system, although many authorities lay much stress on the influence of blood-dyscrasias in producing changes in the blood-vessels of the auricle. The author, however, holds that the "weight of evidence leads to the conclusion that they most frequently depend on a morbid state of the brain, especially on congestion of the organ." He also advances Robertson's idea that functional disturbance of the brain, or of its cerebro-spinal system, giving rise to disorder of the cervical sympathetic, may, by reason of the dominance thus exercised on the vessel-regulating nerves distributed to both intracranial ganglia and the auricle, set up hyperæmia in the former and vascular changes in the latter.

When othæmatoma occurs in the course of general paralysis, it would seem that auricular congestion took place in consequence of the general degeneration of the sympathetic; and it has been suggested by Bonnet that in inflammation of the brain the aural disease becomes advantageous to the patient, since the hemorrhage is thus spent upon the posterior auriculars, coming from the middle meningeal artery. "Other impressions propagated by morbid processes in other organs through the sympathetic nervous system are worthy of consideration: thus, in the examination of insane subjects having this affection, the almost universal prevalence of nasal catarrhs, diseased teeth, and (in the female) of uterine disease is notable, and it is well known that the irritation due to these influences is transmitted through the nerves, and may not only exasperate cerebral disease itself, but is liable to also affect the organ of hearing." The predisponents believed to have an important relation to othæmatoma are as follows: age (as it does not occur before adolescence), insanity, intemperance, cachexia, sex (the male being more liable than the female), and traumatic influences.

All forms of mental disease seem to be predisposing, but the conditions most favorable to othæmatoma are present in acute dementia where long-standing vaso-motor disturbances are followed by paroxysms of excitement.

Women are said to enjoy considerable immunity from the general paralysis of the insane, and consequently to escape the frequent paroxysms of excitement which characterize this phase of mental disease. On the other hand, women are subject to a monthly aggravation of symptoms during the menstrual period, since the mentally sane, even, are more irascible and nervous at this time. The treatment of female lunatics, moreover, is more gentle than that of males, since their attendants are usually of their own sex, and less liable than male nurses to injure in handling violent or idiotic patients. The ears of female lunatics are somewhat protected by their hair and head-dressings.

In the mentally sane, the affection is most commonly met with among prize-fighters, gymnasts, persons given to violent sports, and among drunken and disorderly persons, where blows and falls are frequent. "From a careful study of the subject, the author has come to believe that othæmatoma is almost always due to violence inflicted upon the auricle. Asylum superintendents, however, have been, on the whole, perhaps rather disposed to undervalue the importance of mechanical causes, since it might be construed to imply undue restraint or rudeness in the management of their patients. It is highly probable that violent patients injure their own ears in various ways, and even those who are not violent, but suffering from hallucinations of hearing, undoubtedly injure their auricles by picking at and pulling them in order to gain relief from subjective sounds, pruritus, etc."

The more frequent occurrence of othæmatoma in the left auricle of the insane has been the subject of much speculation. It has been suggested that the near position of the left carotid artery to the heart affords a more direct supply of blood to the left ear, and that, furthermore, the left pinna is more likely to be pulled by others, as it is most convenient to the right hand of the attacking party. It is also supposed that the left auricle is more likely to be pressed in forcible feeding. Dr. Sexton, however, thinks an explanation of the greater frequency of left-sided othæma-

toma must be sought in some other direction, since the above apply only to mechanical agencies. It has occurred to him "that probably some vaso-motor influence might be found to lie at the bottom of the difficulty." It is a fact that unilateral sweating about the head is not an uncommon occurrence, also the left ear is more rapidly invaded in bilateral chronic catarrh,—a condition, Dr. Sexton thinks, due in all probability to some vaso-motor disturbance whereby the nutritive process is interfered with much more on the left side than on the right side. While the agency may be found to lie in some cerebral or cerebro spinal condition, there exists a prominent irregularity in the distribution of the sympathetic nerves which, it occurs to the author, might bring about such a result. Reference is made in this connection to the peculiar arrangement of the nerves extending upward from the cardiac plexus to the two sides of the head. There is here an important irregularity. Thus, while an unvarying connection is maintained with the right side through the superior cervical ganglion, a comparatively imperfect and varying connection exists on the *left* side, the left superior cardiac nerve and the inferior cardiac branch of the pneumogastric only occasionally affording communication between the cardiac plexus and the left superior cervical ganglion. It is held that this asymmetrical distribution above described might be the means of diminishing the vaso-motor dominance in respect to the circulation in the left ear, and thus lead, by disparity of vascularity in the two ears, to distinguishing nutritive changes in the tissue of the two ears, changes which are well marked in chronic catarrhal otitis media, in which the left membrana tympani is frequently found parchment-like while the right membrane is normal, and which are also seen, as the author believes, in the nutritive disturbances in the cartilage of the left auricle in othæmatoma. Othæmatoma does occur simultaneously in both auricles, which form of invasion is "suggestive of centric nervous origin."

No distinction is made between othæmatoma and the so-called "idiopathic" perichondritis of the auricle, since in all cases of othæmatoma, perichondritis is never absent. A peculiar form of othæmatoma is mentioned as occurring in the insane, which is probably due to protracted and violent rubbing of the auricle. "Any portion of the perichondrium may be involved, but it is usually limited to a small space. Thickening is often scarcely observable, and to the feel it is not 'doughy.' The deep-seated nature of the inflamed or congested region, however, may be discovered by stretching out the auricle between the observer's eye and a strong light. The effusion is not sufficient to form a tumor: such cases seem to present the characteristics of the first stage of othæmatoma." The author then describes a case he has recently observed.

Treatment.—It is laid down as a safe rule not to be in haste to interfere unless rupture of the sac be imminent, since in a certain number of cases a manifest tendency to spontaneous recovery exists. It must also be remembered that, whatever the supposed cause or causes, we are dealing with a perichondritis, "in the treatment of which we should be guided rather by its character than its causes." And, furthermore, one should be guarded against the strong tendency to operate and interfere in these cases. Whenever these tumors have been treated like abscesses, by incision, poulticing, and stimulating lotions, the results have been almost invariably unfavorable, since gangrene, carious destruction of the cartilage, and, not rarely, death has been the end. (Dr. Wallis, 1884.)

Wallis then fell back on nutritious diet, mild cathartics, and local applications of lead-water, treating the affection like *noli me tangere*. This treatment continued for weeks was successful in a number of cases. Fisher and Marcé pursued purely an expectant plan of treatment. Sexton declares othæmatoma to have an aggressive and regressive period. In the former the observer is seldom offered a chance of observing the incipient symptoms. Usually a tumor is found to exist, and the surgeon is called in to limit its extension if possible.

"If it is found that the serous or serosanguinolent exudation is not active, and that the quantity already present is not great, we may prescribe rest for the patient, and administer small and frequently-repeated doses of the tincture of aconite-root, with a view to arrest the activity of the circulation about the head. Locally the affected region, and beyond even, may be enveloped with a coating of collodion,

the gentle and uniform pressure produced by its contraction acting as a compress, and thus promoting absorption."

In resorting to methods to increase absorption, care must be exercised lest they increase unduly the local irritation. When the tumor is large and contains a considerable clot, it is best to incise it and cause the contents of the sac to escape. To prevent refilling, a seton is recommended. As the secretion lessens, its removal will be best accomplished by aspiration. Adhesive inflammation is much better accomplished by massage than by the old method of irritation by a seton.

GUMMA OF THE AURICLE.

Partial necrosis of the cartilage of the auricle, as a consequence of an ulcerating gummatous tumor of that part of the ear, is extremely rare, if we are to depend upon the testimony of medical literature. Hessler, of Halle, however, reports the occurrence of a case in 1881, in the *Archiv für Ohrenheilkunde*, Bd. xx., part i., 1884.

The patient exhibited an ulceration in the concavity of the concha of the right ear. This spot, after suppurating for some days, healed spontaneously. Before the suppuration occurred, the auricle became swollen and enlarged, bluish red, and burning, and so painful that the patient could not lie on that ear and sleep. At the first inspection of the ear, the auricle, besides this bluish-red, swollen, and shining appearance, was double the size of the left auricle and stood out almost at a right angle from the side of the head. The furrow in the skin behind the auricle had entirely disappeared, and the skin of the mastoid was swollen and tight. The skin in front of and below the ear was also swollen and very sensitive to the touch.

Upon the anthelix and in front of its division into the crura furcata there was a sore about three millimetres in diameter, the edges and surface of which were yellow and moist, and which discharged a serous matter, yellow and thick.

The auditory canal was uniformly contracted throughout its entire extent, but a small speculum could be introduced and the membrana tympani thus inspected. The latter appeared normal; the hearing was unaffected.

At first sight the affection was very naturally supposed to be syphilitic; but a further examination failed to confirm this opinion, as the rest of the body manifested no trace of syphilitic taint. The patient confessed that, four years before, he had had an ulceration of the penis, in conjunction with gonorrhœa, but said that this had been promptly healed by internal medication and local treatment, without any secondary manifestations. He had not observed at any time since any trace of cutaneous eruption, nor any affection of the mucous membrane of the fauces. In the absence of any trace of syphilis, it was not deemed advisable to establish a specific treatment, especially since medical literature has not presented any case of gummous tumor of the auricle without simultaneous symptoms of syphilis elsewhere on the body. Hence the treatment of the inflammation was limited to the application of compresses of cold lead-water (*eau blanche*). Subsequently the ulcer was cauterized every fifth day with lapis infernalis. The swelling and the sore soon diminished, but the latter did not cicatrize. Some days later the patient returned, with his ear in the condition of the first visit, excepting that the sore was larger and more extended. A second course of treatment, supplemented by incisions in the anterior part of the auricle and injections of a three-per-cent. solution of carbolic acid, with further cauterization by means of lapis infernalis, failed to have any effect. Nor did a course of baths prove beneficial, since the patient returned home worse than when he went away.

After six months of treatment, there finally appeared on the right tibia an enlargement the size of a German mark, rounded and hard to the touch, painless, and completely detached from the bone. No cause could be assigned for its appearance, and it soon became apparent that it must be referred to a syphilitic origin. A course of treatment by iodide of potassium caused both the affection on the tibia and on the auricle to disappear.

It was learned subsequently that, two years before, this patient had been treated for some time, and without success, by a system of bandages, for an enlargement of the joints of the hands, which, however, had not been attributed to syphilis; and, finally, he had been successfully treated for a gummous orchitis by means of iodide of potassium. The syphilitic cause of his auricular disease now remained no longer doubtful.

The case is remarkable by the fact that the aural affection was isolated from all other symptoms or traces of syphilis, and appeared as a tertiary symptom of the disease. This furnishes a demonstration in favor of the specific character of new local formations in persons affected by syphilis, and shows the necessity of treating them, like the original disease, by means of a strictly specific medication.

(To be continued.)

THE ACTION OF THE SULPHATE OF QUINIA ON THE BLOOD.

BY HOBART A. HARE, M.D.

WHILE it is generally agreed that quinia instantly stops the migration of the white blood-corpuscle on the stage of the microscope, it has been argued by many that the drug does not prevent its migration in the body.

For the purpose of coming to some definite conclusion in regard to what the action of the drug really was, I carried on four series of experiments, using twelve Cohnheim frogs in each series.

In order to provoke migration, I used the point of a hot needle, which was applied and instantly withdrawn.

As all results would be negative unless the blood-vessels observed were of the same general size in every case, I never watched an arteriole over three millimetres or less than one and one-half millimetres in diameter, the average diameter of the vessels being in all four series two and a fraction millimetres.

In the first series I counted the migration from the vessels when there was no inflammation and no drug present. I found that in twelve frogs the migration in thirty minutes only averaged three.

In the next series, in which I caused inflammation in the manner stated, I found that in twelve frogs the migration in thirty minutes averaged twenty-nine.

In the third series, to which I gave ten grains of the quinia hypodermically, the migration averaged 1.4 in thirty minutes.

In the fourth series, where I caused inflammation and gave ten grains of quinia hypodermically, the migration did not take place at all in five of the frogs, two corpuscles migrated from two of the frogs, and from the other five only one migrated in thirty minutes, so that the average was virtually none at all.

These series would prove that the corpuscles are stopped in their migratory movements by the drug, at any rate in regard to passing through the wall of the blood-vessel.

Whether the drug does this by a direct action on the corpuscle or not is another question.

To discover in what way the drug stopped the migration,—that is, whether the corpuscle itself was influenced, or whether the blood-vessel wall was acted on,—I instituted the following observations:

Causing inflammation and administering the drug, I noticed that the corpuscles stopped at the irritated point and congregated, but did not pass through the wall as they did when there was no drug but simply inflammation present; and *this* difference existed, viz., that where inflammation was alone present the walls were dilated and therefore thinner, but where the drug was present also the walls were contracted. This contraction could not only be seen by the eye, but was marked by the use of the eye-piece micrometer.

To cause this contraction the drug must act either on the vaso-motor system or the muscular coat of the blood-vessel wall.

In order to see if the contraction of the blood-vessels was due to centric vaso-motor stimulation, I made a section of a frog's spinal cord high up and found the contraction was still present, and in another frog, to whom quinia was given after section was made, the contraction took place. This proves that the action is not centric. The only remaining action which it could have is on the peripheral vaso-motors or the muscular fibres in the vessel walls. According to Prof. H. C. Wood, atropia in toxic doses probably paralyzes the muscular coat. I therefore gave a frog one-sixtieth of a grain of atropia, and saw an arteriole dilate, thus proving one-sixtieth of a grain of atropia to be a toxic dose to the frog. Another frog was taken, inflammation caused, quinia given, then atropia, and the contraction caused by the quinia remained. This would seem to prove peripheral stimulation; but this is not at all tenable, for if atropia paralyzes the muscular fibres, the stimulated peripheral endings could not cause contraction.

The only explanation seems to be that

the quinia acted on the fibres themselves to such an extent that it antagonized the atropia.

My observations in regard to the effect which section of the cord would have on vaso-motor contraction are directly opposed to those of Jerusalimsky, who asserts that the contraction is not present after section is made. Schroff found that in the cinchonized animal neither galvanization of a sensory nerve nor asphyxia produced contraction, claiming with Jerusalimsky that there was paralysis of the whole vaso-motor system, as I understand them. Heubach found *no* paralyzant action of this kind when he used galvanization of a sensory nerve. To prove, then, that quinia has no paralyzant action of this kind, I took a frog and strapped him to the frog-plate by placing a very strong and tense rubber band over the windpipe, and in order to prevent his using his skin as a means of respiration I allowed it to become dry. On examining his mesentery, I found no paralysis present at all, and the arterioles evidently very much contracted, as if by the action of the stimulated vaso-motors combined with a direct action of the drug on the muscular coat. It therefore seems proven to me that the drug does not paralyze the vaso-motors either peripherally or centrally, and probably has no action on them at all, unless it be *perhaps* very slight stimulation, which I doubt, any contraction of the vessel being due to the action of the drug on the muscular coat. It seems to be decided that quinia does also decrease heart-power, as nearly all observers agree in this respect,—that is, in toxic doses.

I shall consider therefore proven,—

1st. That the sulphate of quinia does not cause paralysis of the vaso-motors.

2d. That the contraction, when the sulphate was administered during inflammation, was produced by a direct action on the muscular coat of the blood-vessel, and was independent of any vaso-motor action.

3d. That the drug does prevent the migration of the white blood-corpuscle in the body, particularly when inflammation is present.

4th. That this stoppage of migration is due not to any action on the corpuscle itself, but to the contraction of the muscular coat and the decreased heart-power. Because if you have a dilated vessel you must have a thin wall, and if you have a strong heart you have both the *vis a tergo* of the circulation and also the decreased resistance of the wall in so thin a state, and consequently the corpuscles migrate readily.

If you give a drug which causes both decrease in that heart-power and contraction of that inflamed blood-vessel, you no longer have that *vis a tergo* so strong, nor the doors of migration so wide open. Briquet, A. Eulenberg, and Schlockow have all shown that large doses of quinia depress the heart and cause its stoppage in diastole. In two frogs' hearts which I immersed in a solution of quinia I also got stoppage in a very short time in diastole. It seems rather difficult to reconcile the two facts that quinia should have such a depressant action on the heart-muscle, which, though striated, is virtually involuntary, and yet seem to have a stimulative action on the non-striated muscular fibres in the blood-vessel walls. No explanation can be offered of this other than there being some depressing action on the heart's contained ganglia.

Bonour, Arvedi, Baldwin, Melier, Monneret, and Magendie state that the blood after death from toxic doses of quinia is dark, defibrinated, and non-coagulable. Briquet, on the other hand, states that it is not as the others state, but just the contrary.

Taking three rabbits, I gave them three different doses respectively, as follows: to the first, one hundred and twenty grains, hypodermically; to the second, one hundred grains; and to the third, seventy-five grains.

In every case the blood clotted very rapidly and firmly in the vessel it was caught in, and there was a clot in the soft, flabby heart.

It may be well to state that the temperature of the surrounding atmosphere during the observation of the frog's mesentery was never allowed to vary more than five degrees Fahr. The observations were always made at the same time of day, and the frog was thrown away after his mesentery had been exposed thirty minutes, as diapedesis was set up after that time by the abnormal exposure of the parts. The water used to keep the mesentery clean was of uniform temperature also. The rabbits were young and healthy, and were kept in a room of good size, with plenty of food, light, and air.

OLEATE OF ACONITIA IN OPHTHALMIC PRACTICE.

BY ALBERT G. HEYL, M.D.,

Ophthalmic Surgeon to the Episcopal Hospital.

I DESIRE in this paper to place on record some clinical experience in connection with the use of oleate of aconitia in ophthalmic practice. The preparation used contained two per cent. of the alkaloid. It was generally applied to the skin of the upper lid, over a surface equal to the area of a ten-cent piece. The effect was local. About an hour after the application, a sensation of heat would be experienced; then profuse lachrymation would occur, the tears escaping freely through the nostril of the same side. The effect lasted for a varying period of time. Generally several hours would elapse before the effect ceased. I have, however, known it to subside in an hour. The following cases will give illustration of its therapeutic action:

Case I.—A Swedish sailor, who, about a week before his arrival at this port, noticed something wrong with his R. E., on the arrival of the vessel came under my care at the Episcopal Hospital. The L. E. was normal. The iris of the R. E. widely dilated, the power of accommodation annulled, but distant vision good. The patient was a vigorous man of 30 years of age, without any evidence of general disease. There was a history of a slight urethritis. The pupil was very easily influenced by eserine: even a solution of $\frac{1}{30}$ grain to f℥j would temporarily contract the pupil, and with a stronger solution the ability to see a few inches from the eye could be brought about. As soon, however, as the remedy was suspended, the eye would return to its previous state. There was a seething sound in the right ear, evidently depending on the same cause as the eye-trouble; also neuralgic pains over the right half of the head, with tenderness on pressure over the supra-orbital foramen. Optic nerve looked a little whiter than normal; the retinal veins seemed to be abnormally large, while the arteries were of normal calibre. The small venules running into the retinal veins were visible, but corresponding arterioles were absent. Fowler's solution in small doses was given, but was followed by the occurrence of a simple continued fever. The arsenic was stopped, and under appropriate treatment the fever subsided. After a proper interval, the arsenic was again given, with a recurrence of the febrile disturbance. Evidently there was either an idiosyncrasy in this phenomenon or the abnormal state which gave rise to the eye-trouble was the cause of it. The tinct. aconit. rad. was given, and apparently through it the accommodation partly returned, the patient being enabled to read Jaeger 11 at about ten inches. No further progress seemed to be made, and the oleate of aconitia was employed. The effect was as follows: I saw him about two hours after the application. There was profuse lachrymation, pupil perhaps slightly contracted. An hour later, lachrymation still continues, pupil is contracted not circularly, but is heart-shaped. Iris is injected. Superficial conjunctival vessels, perhaps veins, are injected. The large subconjunctival veins corresponding to the horizontal and vertical meridians were also injected. The eye did not seem sensitive to light; there was a good deal of winking, presumably due to the tears. No change was induced in the accommodation.

Cases of this kind are well known clinically, although their pathology is obscure. In my opinion, this was not a case of paralysis of the iris and ciliary muscle, except perhaps in a very restricted sense. It is true that both loss of accommodation and dilatation of the iris existed, but by the use of eserine they could be brought back. The fifth pair of nerves probably stood in some causal relation to the eye-trouble. It is noteworthy that, while slight, irregular contraction of the iris was induced by the aconitia, no change in the accommodation was observed. On the other hand, the internal use of the tincture of aconite seemed to be followed by considerable improvement in the accommodative power.

Case II.—W. G., æt. 34. Sent to me by Dr. F. L. Haynes. This patient had been struck on the L. E., sixteen hours previous to my seeing him, by a flying bar of hot iron. Atropia had been instilled and hydrate of chloral given internally. When I saw the patient there was intense pain about the eye. A superficial eschar about three-fourths of an inch long by one-sixteenth broad existed in the skin of the upper eyelid; the latter was purple from venous engorgement. The media were cloudy. By reflecting the light into the eye, a number of dark lines were seen, probably due to wrinkling of the anterior capsule. The retinal arteries were very tortuous. R. E. could not be examined satisfactorily at this time. A day or two later this was examined again, and the same arterial tortuosity observed as in the L. E. Pressure on the left supra-orbital nerve induced a sensation like that of a foreign body rolling in the eye. Morphiæ sulph., gr. $\frac{1}{8}$, internally, night and morning, was ordered, and also the oleate of aconitia to be applied in the neighborhood of the eye. In a few days there was complete

relief of the pain, and the patient was discharged.

Case III.—Miss B. came to my office February 1, 1884, with the following history. Within a few days the skin about the left orbit had been cut by pieces of broken window-glass. The wounds had healed, leaving two small scars, about on a level with the infra-orbital ridge. The eye was very sensitive to light, although not injected. The retinal arteries in each eye showed the tortuosity common in cases of so-called irritable retina. Pressure on the scars would cause the lids instantly to close. The patient further suffered from false projection: that is to say, in looking with the left eye at an object near at hand, it would appear much farther away from the patient than it really was. This I suppose was due to some defect in the process of accommodation. Both internal treatment and local applications of chloroform-liniment about the eye were ordered. A weak solution of eserine was also applied. No material relief was thus obtained. The oleate of aconitia was then applied to the scars, with the effect of both relieving the patient and at the same time seeming to cause the cicatrices to disappear.

In both of these cases there was undoubtedly lesion of the peripheral ends of the fifth pair. Some doubt may be raised as to the effect of the aconitia in relieving Case II., as morphia was given at the same time. My impression, however, at the time was that the aconitia was really the efficient agent. Case III. was less open to doubt: here was a patient whose trouble was beyond a doubt caused by the cicatrices in the skin, under observation for months, treated with slight effect by various remedies, and finally relieved by the local use of the aconitia. This case seems to point to this conclusion,—viz., that in abnormal conditions of the fifth, depending on lesions of the peripheral ends, as from scars in the skin, etc., the aconitia will do good.

There are certain cases of ciliary neuralgia which are relievable, in my experience, with the oleate of aconitia, and perhaps the true explanation of such cases is found in a peripheral lesion of the fifth, although invisible to the naked eye.

Graefe's classical case of cure of blepharospasm by section of the supra-orbital nerve is well known, and may be studied in connection with the above cases. In this case the exciting cause was a blow from a missile apparently inducing such change in the peripheral nerve-filaments as to set up reflex spasm. There are, however, cases of ocular pain which are not reached by the aconitia. Thus, a patient who suffered with great ocular pain and great intolerance of light, and in whose eyes decided pigmentary change in the outer layer of the retina was observed, received no benefit from the aconitia. The fifth pair was involved in some way in this case, but the aconitia seemed to produce no effect.

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TRANSLATIONS.

The Effects of Bromoform, Bromethyl, and Bromethyline.—Bonome and Mazza, from a series of physiological experiments recently conducted in the laboratory of Prof. P. Albertoni, in the university at Genoa, obtained the following results: 1. *Bromoform* is a general anæsthetic. Dogs and guinea-pigs almost always show the same symptoms of anæsthesia and muscular relaxation, following inhalation, that the human subject does. In five experiments upon men, three were well narcotized, lasting even for a whole hour; in two (probably on account of the use of a defective preparation containing free bromine) there was no narcosis, but, on the contrary, irritation of the conjunctivæ, a flow of tears, burning in the eyes, etc. The narcotic action they believe to be a little slower in appearing than when chloroform or ether is used, but the success is apparently the same as with both of these valuable anæsthetics.

2. The narcosis obtained from the inhalation of bromoform is free from the stage of exaltation which we are called upon to witness during chloroform-administration. On this account preference should be given this agent in case the patient is subject to epilepsy or alcoholism. Billroth and Nussbaum have each directed attention to the danger of exciting attacks in epileptics by the use of chloroform. This does not occur during the use of bromoform, which allays the irritability of the cerebral cortex.

3. Bromoform does not disturb the respiratory function, but after prolonged narcosis there is a slight reduction of the blood-pressure. The respiratory fluctuations of the blood-pressure in the course of the narcosis are very regular; the pulse remains strong. In none of the dogs which

inhaled it did the bromoform cause sudden arrest of the heart's action, such as is seen during the use of chloroform.

4. During the bromoform narcosis, while it was noticed in dogs that there was decided mydriasis, in man there occurred only trifling alterations of the pupil; there was neither nausea nor vomiting. The quantity of bromoform required to produce complete narcosis is less than that of chloroform as it is commonly used.

5. In the first few hours after narcosis, it was noticed that there was a sinking of the temperature exactly as after chloroform; but the patient appeared to recover sooner from its effects.

6. Given by the mouth, bromoform also acts as a hypnotic and anæsthetic.

7. Moreover, bromoform prevents putrefaction in organic substances (urine and meat); bacteria are not developed in the presence of bromoform.

8. Injected under the skin, bromoform is fatal when given in a dose of 0.15 gm. for every 100 gm. of the bodily weight.

Ethyl bromide produces narcosis more quickly than chloroform or bromoform, but is more easily eliminated from the system, and, on this account, its effects are more temporary. It is to be recommended for short operations. It is less active than bromoform, and becomes poisonous at a point of each 0.17 gm. for 100 gm. of the bodily weight. Whilst the narcosis reduces the blood-pressure (20–30 mm.) at first, it rapidly increases again after the termination of the narcosis, when the respiration also is accelerated. Bromide of ethyl also reduces the irritability of the cerebral cortex, and likewise hinders the development of bacteria in organic infusions.

Ethylene bromide does not produce complete narcosis upon inhalation, but, when pushed, causes fatal results by abolishing the cardiac activity.—*Centralblatt für Chirurgie*, No. 36, September 6.

Counter-Prescribing in France.—An interesting case has just been adjudicated in Rouen. The law forbidding grocers to deal in pharmaceutical products, Eustache, a grocer of St.-Étienne, was arrested for selling castor oil at retail. The court decided—not very logically, it would seem—that, castor oil not being a pharmaceutical product, grocers might sell it; but, at the same time, they must sell it in commercial quantities and not in medicinal doses. Inasmuch as the unfortunate grocer acknowledged playing the rôle of the pharmacist, he was found guilty and compelled to pay five hundred francs fine.—*La France Médicale.*

Hysterectomy for Uterine Cancer.—In a recent discussion of the treatment of carcinoma uteri by extirpation of the uterus, before the Academy of Surgery, most of the surgeons agreed with the opinion expressed by Verneuil and Polaillon, that "hysterectomy would be a very good operation at the beginning of cancer, if it were less dangerous; but with the progress of surgery its dangers may be lessened. It is, therefore, an operation for the future; but under the present conditions, the mortality being one in three, the surgeon has not the right to resort to it, because fortunate results from it are far from being frequent."—*Bull. Gén. de Thérapeutique*, September 15.

Treatment of Eczema of the Scalp.—M. Doyon recommends the following in infantile eczema of the head:

℞ Acidi salicylici, 1 gr.;
Tincturæ benzoini, 2 gr.;
Olei petrolei, 50 gr. M.

When a firmer preparation is needed, having a more drying effect, he uses the following in preference:

℞ Acidi salicylici, 2 gr.;
Olei petrolei, 50 gr.;
Zinci oxidi,
Amidon, āā 25 gr. M.

To be applied to the excoriated surfaces and retained with a compress of wadding. It need not be disturbed for several days unless the secretion is free, in which case it is to be changed daily.

Effects of Removal of the Thyroid Gland.—Dr. Zesas claims (*Wiener Med. Wochenschrift*) that the thyroid gland is supplementary to the spleen in its hæmatopoietic functions, and that its removal is followed by an excess of white corpuscles in the blood. From experiments upon animals the statement is made that removal of both thyroid gland and spleen invariably causes death. It is also said that thyroidectomy is followed by nervous disorders, without actual paralysis, but with sluggish movements, fibrillary contractions, tremor, and even tetanus. Zesas therefore denounces the operation as an unjustifiable one.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 18, 1884.

EDITORIAL.

TEA AND COFFEE.

THE physiology of food is always interesting, especially when therapeutic applications are suggested. In the *Ephemeris* for September, Dr. Squibb communicates the results of some recent analyses of tea and coffee, which are worthy of note. Without discussing the method of analysis pursued by the experimenter, we will give some of his results. The following varieties of tea, obtained from wholesale dealers, were assayed in order to ascertain the best variety for use in making a standard fluid extract for medical use.

A fancy, high-flavored Formosa Oolong, eighty-five cents per pound, contained 3.10 per cent. of caffeine.

Extra fine small leaf gunpowder, sixty-five cents per pound, contained 3.51 per cent. of caffeine.

Formosa Oolong, fifty-five cents per pound, contained 2.80 per cent. of caffeine.

Formosa Oolong, forty-five cents per pound, contained 2.74 per cent. of caffeine.

Basket-fired Japan, forty-four cents per pound, contained 2.80 per cent. of caffeine.

Basket-fired Japan, forty cents per pound, contained 2.87 per cent. of caffeine.

Amoy Oolong, large leaf, twenty-five cents per pound, contained 2.95 per cent. of caffeine.

Congo, large, coarse leaf, North China, twenty cents per pound, contained 2.41 per cent. of caffeine.

This series embraces representatives of the tea market from the very highest to the very lowest prices and qualities. Teas sold below twenty cents per pound are said to be mere dust or refuse from better grades, or imitations of tea made from other plants.

It will be first noticed that the yield of caffeine does not vary as much as might be expected, and really varies comparatively little; and, next, that the disparity between the caffeine value and the money value is very great. The two values bear only a general relation, which is much confused by exceptions. The highest-priced tea does not contain the most caffeine; while the next to the lowest in price ranks third in the proportion of caffeine. The lowest-priced tea of all contains within .7 per cent. of caffeine of the highest.

This result showed that some other element than caffeine gives value to tea, probably the aroma or flavor, although from a medical stand-point the yield of the alkaloid is probably the best measure of the value yet reached. It was concluded that the extra gunpowder tea was the best source of a fluid extract for therapeutic use, because it yields about one-fifth more caffeine than the basket-fired Japan, which would be the next choice. The standard strength of the fluid extract of camellia recommended is that yielding 3.5 per cent. of the alkaloid, the adult dose being fifty minims, or a small teaspoonful. It is best given in ice-water. From a long course of physiological testings, it was determined that there was, beyond a sense of well-being and a general toxic effect, no influence upon secretions or excretions, and especially no after depressing effect, observed from either tea or coffee. It does not appear whether an estimation of the daily excretion of urea, or nitrogen, was made or not; it is not probable, however, that the well-known physiological effects of tea and coffee in reducing the excretion of urea (established by Lehmann) are referred to in making this statement, but merely the general action upon quantity and appearances of the secretions.

With coffee a similar assay was made of the principal kinds obtainable in the market, as follows:

Mocha, an Arabian coffee, twenty-three cents per pound, yielding 1.05 per cent. of caffeine.

Mocha, seventeen cents per pound, yielding 1.07 per cent. of caffeine.

Mandheling Java, twenty-three cents per pound, yielding 1.30 per cent. of caffeine.

Mandheling Java, twenty-three cents per pound, yielding 1.22 per cent. of caffeine.

Interior Java, seventeen cents per pound, yielding 1.10 per cent. of caffeine.

Maracaibo, eleven cents per pound, yielding 1.20 per cent. of caffeine.

Rio, strong and rank, eleven cents per pound, yielding 1.00 per cent. of caffeine.

Rio, ten cents per pound, yielding 1.05 per cent. of caffeine.

Dr. Squibb remarks that the same disparity between market value and yield of caffeine is observed here as in the case of tea, but the caffeine value is much more uniform than in tea. The difference between the extremes is here only .3 per cent., while in tea it is 1.1 per cent., the tea yielding on the average less than two and a half times the amount of caffeine.

The value of the aroma in coffee is fully considered, but, curiously enough, no part is given to the aromatic oil in estimating the strength or therapeutical effects of the coffee. Comparing effects to determine their relative therapeutic value, the fluid extract of roasted coffee made like that of camellia was found to contain 1.68 grains of caffeine in each two drachms, which was equivalent in physiological effect to three grains of pure caffeine, or to one hundred and eighty minims of fluid extract of coca, to seventy minims of fluid extract of tea, to sixty minims of fluid extract of guarana, or to one hundred and fifty minims of fluid extract of green coffee. The adult dose would be about forty minims, equivalent to one grain of caffeine, to be gradually pushed to its full physiological effects. A cup of good Java coffee was found to contain 2.78 grains of caffeine, which was found to be in effect equivalent to five grains of pure caffeine, or nearly double the single maximum dose of the German Pharmacopœia. So that in some the dose above given may be considerably increased; and this would undoubtedly be the case were the person accustomed to the use of tea or coffee as a beverage.

PROFESSOR WILLIAM OSLER.

THE election of William Osler, M.D., of Montreal, Canada, by the trustees of the University of Pennsylvania to the chair of Clinical Medicine in the faculty of that institution, on the 7th instant, is a well-merited compliment to him and a substantial recognition of the merits of a rising man. Dr. Osler, having pursued his medical studies at the McGill College, Montreal, and at the Toronto School of Medicine, received the degree of M.D. in 1872, and subsequently he attended lectures at the University College, London, and in Berlin and Vienna. In 1874, upon his return from Europe, he was chosen to fill the chair of Institutes of Medicine in McGill College, and subsequently was appointed Pathologist to the Montreal General Hospital and Lecturer on Clinical Medicine in the summer session. He is a Fellow of the Royal College of Physicians of London, and President of the Canada Medical Association. His contributions to medical literature, though not voluminous, are characterized by originality and scholarship, and have already won for him enviable distinction. We tender Dr. Osler a hearty welcome, and assure him that he will find in Philadelphia many friends who already know him by reputation, and who will cordially greet him as he enters upon his new duties among them.

WE regret to hear that, on the day after Prof. Mallet came to Philadelphia, most of his household goods were destroyed in the burning of a storage-warehouse. We hope, however, that this will prove a good omen, as we recall the fact that the late Prof. Gross met with a similar loss shortly after his arrival, and he subsequently remained here for life.

HENRY C. LEFFMANN, M.D., has just been elected Demonstrator of Chemistry at the Jefferson Medical College.

LEADING ARTICLES.

PECULIARITIES OF CONFORMATION IN THE SKULLS OF CRIMINALS.

DR. JOHANN BADIK, a disciple of Benedikt's, has during the past ten years occupied himself with the question of the anomalies of the skulls and brains of criminals. His investigations have been conducted in the great Hungarian prison at Illava, of which he is the physician, and the results are published in a recent number of *Virchow's Archiv.* At Illava are imprisoned all offenders in Hungary sentenced to terms exceeding ten years, in number more than six hundred, and including those convicted of theft, burglary, murder, arson, counterfeiting, and the like. Truly a fine field for studies of this kind.

The investigations have been directed especially to the skulls and to the anomalies of function of the central and peripheral nervous systems. As regards the skulls of criminals, he found as highly characteristic,—1, flattening posteriorly, with low position of the external occipital protuberance; 2, asymmetry, and, 3, in consequence of this, a difference in the size and position of the foramina transmitting the blood-vessels. The anomalies of function of the nervous system, central and peripheral, consisted of a progressive series of exaltation- and still more of depression-states, as well of the intellectual life as of the activity of the nervous system, with all their resulting phenomena.

The lesions of the brain and its coverings, as found post mortem in some sixty or seventy cases, consisted of scattered areas of translucency in the calvarium; in a few cases local adhesions between the dura and the arachnoid, the latter presenting a gray appearance, through which showed the dilated blood-vessels of the pia. In the arachnoidea and pia, and in the sulci, was collected an opaque fluid of the consistence of glycerin. Upon puncture of the arachnoidea this fluid escapes slowly from the subjacent sulcus, but not from the sulci immediately adjacent,—a sign that the membranes are adherent to the summits of the convolutions. The pia, grayish in color, cannot be detached from the brain without injury to the latter, and shows, besides dilated blood-vessels, many scarcely noticeable adhesions, which extend into the sulci, and by uniting the contiguous parts of the gray matter tend to obliterate the furrows. The gray substance is less deep, but of a firmer consistence, than normal. The white substance shows no gross abnormality. The ventricles contained in only one instance an increased quantity of fluid.

Dr. Badik classifies criminals into four typical groups, a division based upon the association of certain mental and moral qualities with definite abnormalities in the skull and corresponding lesions in the brain and its coverings. From the anatomical stand-point these groups arrange themselves into two classes: 1, those with symmetrical skulls; 2, those with asymmetrical skulls. There are then under

I. SYMMETRICAL SKULLS.

A. *The small (undeveloped) skull, without pathological changes, either in the brain, which is correspondingly small, or in its membranes.*—That the possessors of these brains are simple-minded persons, concerning whose lack of mental development and of intellectual capacity there could be no question, is obvious. They are, as a rule, good-natured inmates of the institution, who can be employed only at the most indifferent occupations, uneducated and incapable of education. Consequently they depart from prison, after having served out their term of punishment, in the same mental condition as that in which they entered it. They are not in a position to understand either the gravity or the consequences of their offences, and they are equally indifferent to their punishment. They are usually great feeders. Unable to comprehend the importance and results of evil deeds, and having no idea of morality, religion, or law, they commit crime in pure simplicity, or as the tool or associate of other miscreants. Their want of moral perception leads them ever to the commission of new offences when permitted to go at large.

B. *Skulls of medium development, with the above-described lesions of the brain and its membranes.*—To this group belongs a considerable but by no means the largest number of offenders. Its members are intellectually more developed, and comprehend the nature and consequences of their crimes. Their behavior in prison is, as a rule, good. They endure their

punishment with patience, occasion little trouble, and afford no bad example to their fellow-prisoners. As a rule, these individuals leave the prison improved mentally and morally, and are practically never recommitted for further offences. They suffer much from neuroses of the vascular system, complain much of headache and dizziness. The abnormality of the nervous system expresses itself in the motor sphere in two ways: they either display great strength or they cannot be induced to work, alleging the most varied pretexts as the cause of their laziness. Their crimes have been usually committed in states of intense emotion, by reason of jealousy, hunger, in the defence of their rights and possessions, revenge, or in vindication of their outraged honor, etc.

II. ASYMMETRICAL SKULLS.

Here the corresponding lateral parts are unlike in position and size.

C. *The brain and its membranes show no pathological changes.*

The majority of the inmates of the prison present this skull-malformation.

Of the gravity of their crime, which is usually great, they have little idea. Their thoughts are usually occupied with evil, and their deeds are correspondingly bad. They are liars, slanderers, swindlers, scamps, and withal trifling and shameless. There is no evil that they are incapable of planning and committing. They are usually leaders in crime, who urge on and instruct others, and also who stir up discontent, revolt, frays, and combats, who slander and bear false witness against their associates. They feel no repentance for past misdeeds, and by themselves or with their fellows are ready forthwith to rob, murder, or destroy, as may suit their purposes, without remorse, to commit villanies that are neither explicable nor comprehensible.

These are criminals who are benefited neither by instruction, nor by counsel, nor by religion, nor by punishment, who end the vicissitudes of a checkered career in prison.

D. *Asymmetrical skull, with pathological changes in the brain and its coverings.*—The character of criminals of this type depends wholly upon the lesions of the central nervous system. When the pathological changes are slight, the condition is analogous to that of criminals referred to C; when they are more advanced, not only are vascular neuroses present, but also epilepsy in its various forms. In truth, it is among criminals of this class that epilepsy in its most varied and terrible forms is seen. These are prisoners whose crimes have been committed for the most part (if not indeed always) in a state of perverted consciousness and are remembered only as a dream. The mental condition, always feeble, sinks at middle life into imbecility, and they are often paralytic. Anything like education is in these cases obviously out of the question. These criminals reach towards and often transcend the border-line between crime and insanity. The proportion of the four types at Illava was—A, 1; B, 3; C, 9; D, 0.5.

The criminal classes have claims upon society that are as yet imperfectly recognized. Self-interest joins with the highest motives in urging the close and searching investigation of the causes of crime from all points of view. These studies of Dr. Badik's, and others like them, will receive attention more widely than they will be at present accepted, especially in their more remote bearings. But we believe that it is by such investigations that the means will be found to reclaim many criminals, to proportionately diminish crime, and thus to benefit society at large. Neither the criminal class nor any other class stands wholly apart and antagonistic to society. The evil and the good form society, and betterment can only come by knowledge.

J. C. WILSON.

NOTES FROM SPECIAL CORRESPONDENTS.

SIAMESE THEORY AND PRACTICE OF MEDICINE.

ALL nature, according to the Siamese, is composed of four elements,—namely, earth, water, fire, and wind. The human body is supposed to be made up of these same elements, which are divided into two classes, visible and invisible. To the former belongs everything that can be seen, as the bones, flesh, blood, etc.; to the latter, the wind and the fire. The body is composed of twenty kinds of earth, twelve kinds of water, six kinds of wind, and four kinds of fire.

The varieties of wind are as follows: the first kind passes from the head to the feet, and the second variety from the feet to the head; the third variety circulates in the ar-

teries, forming the pulse; the fourth variety resides in the abdomen outside of the intestines; the fifth resides in the intestines, and the sixth enters the lungs in the act of inspiration.

The four kinds of fire are: first, that which gives the body its natural temperature; second, that which causes a higher temperature, as after exercise or in fevers; the third variety causes digestion, and the fourth causes old age.

The Siamese divide the body into thirty-two parts, as the skin, heart, lungs, etc. The body is thought to be subject to ninety-six diseases, due to disarrangement of the earth, wind, fire, and water. An undue proportion of fire causes fevers, and dropsies are caused by too great a proportion of water. Earth is supposed to produce disease by invisible and impalpable mists and vapors, and wind can cause all manner of complaints. Nine out of every ten natives, when asked what is the matter with them, will answer, "Wind." (Not long ago, on our way to Bangkok, we found a man dead upon the river-bank. The boatmen were speculating as to the cause of the man's death; but the oldest man in the company soon settled the matter by gravely remarking that, in all probability, it was due to wind.) It is thought that the external elements are constantly acting upon the elements composing the body, causing health or disease. Thus, in the hot season, the Siamese believe, we are more liable to fevers, and in the rainy season to dropsies, due to too great an absorption of water. Spirits are also supposed to have great power over our bodies, deranging the elements and thus producing all manner of maladies. One of our young men remarked not long ago, while travelling in a rather lonely portion of country, "I am not afraid of tigers, but I do fear spirits." The Siamese have numerous spirit doctors, and many are the propitiatory offerings made to the immaterial beings that fill the air.

In the time of Buddha lived one still worshipped as the Father of Medicine. To him, it is said, the plants all spoke, telling their names and medical properties: these were written in books, and have become sacred. If they fail to produce the results ascribed to them, the fault is never theirs, but is due entirely to want of merit in either doctor or patient. The natives use almost everything as medicine; the bones and skins of various animals occupy a large part of their pharmacopœia, while the galls of snakes, tigers, lizards, etc., are among the most valuable of their medicines. Most of the Siamese remedies are very complicated, being composed of scores of different ingredients. The following is an absurd recipe for snake-bite: A portion of the jaw of a wild hog, a portion of the jaw of a tame hog, a portion of the jaw of a goat, a portion of goose-bone, a portion of peacock-bone, a portion of the tail of a fish, a portion of the head of a venomous snake: these, being duly compounded, form a popular remedy when the venom has caused lockjaw. Burnt human bones, powdered and mixed with an equal portion of powdered alum, form a favorite medicine for sprinkling on ulcers. The eye-teeth of tigers, bears, lions, and various other animals (the more the better), ground up together, form the most popular remedy for fevers. The ashes of earthworms and human hair, mixed with cocoanut-oil, is frequently used for cuts. Every native physician has an image of Pra Ruse, the father of arts, in his house. All drugs are first placed in this idol's hand and receive his blessing; afterwards they are taken to the patient's house and boiled in earthen pots, a wicker-work star always being placed above and below the drugs, to prevent the spirits from tampering with them. In all fevers the doctor fills his mouth with some concoction and squirts it over the naked body of the patient in a fine spray, exactly as the Chinese laundry-men sprinkle clothes.

Dissection is never practised among the Siamese, consequently they are grossly ignorant in regard to the science of anatomy. The writer has not unfrequently seen them hew a body in pieces with a cleaver at least two feet long, but very little is ever learned from these rough post-mortem examinations. They are usually made with the expectation of finding one or more tumors in the abdominal cavity, which they suppose to be the work of witchcraft. They usually are successful in finding what they look for. Sometimes the spleen, at other times a kidney or some other normal organ, is mistaken for an abnormal growth inserted in the body by superhuman agency. The functions of the different organs are not at all understood. In the heart is supposed to be a cavity about the size of an almond. This cavity is thought to be filled with a fluid which changes its color and consistency with our passions. When we are calm and peaceful, this fluid is perfectly clear, like water; when we are angry, it is turbid; when very angry, it turns dark; and when we are in love, it is red. In stupid persons the apex of the heart is rounded, while in those possessing the usual amount of wisdom it is pointed. It is not known that the heart has anything to do with the circulation.

E. A. STURGE, M.D.

PETCHABURI, SIAM, June 2, 1884.

DRS. GRESSIN AND BOTARD, of Havre (*Union Médicale*), have made the interesting discovery that in the weever, or sting-fish (*Trachinus draco*, Linn.), and perch (*Trachinus vipera*), there is at the base of the dorsal spines a cul-de-sac which contains a gland secreting a poison. Injections of this glandular secretion into frogs, fish, birds, etc., caused pain, spasm, clonic convulsions, collapse, and death.

PROCEEDINGS OF SOCIETIES.

AMERICAN GYNÆCOLOGICAL SOCIETY.

THE Ninth Annual Meeting of the American Gynæcological Society was held in the city of Chicago, Illinois, at the Palmer House, on Tuesday, Wednesday, and Thursday, September 30, and October 1 and 2. Dr. Albert H. Smith, President of the Society, and Dr. William H. Byford, Vice-President, occupied the chair. The weather was favorable, and the sessions were well attended. The following-named members of the Society answered the roll-call: William H. Baker, M.D., Boston; Bernard Browne, M.D., Baltimore; William H. Byford, M.D., Chicago; Alexander Dunlap, M.D., Springfield; George J. Engelmann, M.D., St. Louis; Frank P. Foster, M.D., New York; William T. Howard, M.D., Baltimore; A. Reeves Jackson, M.D., Chicago; E. W. Jenks, M.D., Detroit; Joseph Taber Johnson, M.D., Washington; Richard B. Maury, M.D., Memphis; Paul F. Mundé, M.D., New York; C. D. Palmer, M.D., Cincinnati; Thad. S. Reamy, M.D., Cincinnati; John C. Reeve, M.D., Dayton; William L. Richardson, M.D., Boston; Edward Warren Sawyer, M.D., Chicago; John Scott, M.D., San Francisco; A. H. Smith, M.D., Philadelphia; T. Gaillard Thomas, M.D., New York; Ely Van de Warker, M.D., Syracuse; H. P. C. Wilson, M.D., Baltimore.

At various times during the meeting the following-named gentlemen were invited by vote to take part in the proceedings, and were made Members by Invitation: Dr. E. C. Dudley, Dr. W. E. Clarke, Dr. T. P. Seeley, Dr. N. S. Davis, Dr. Liston H. Montgomery, Dr. Ralph E. Starkweather, Dr. A. H. Burr, and Dr. George H. Randell, all of Chicago; Dr. P. McClure, of Dubuque, Iowa; Dr. Henry G. Dearborn, of Nashua, New Hampshire; Dr. J. H. Carstens, of Detroit; Dr. T. B. Harvey, of Indianapolis; Dr. Fritz Netzler, of Stockholm, Sweden; Dr. Frank Woodbury, of Philadelphia; Dr. Wesley M. Carpenter, of New York; Dr. W. H. Myers, of Fort Wayne, Indiana; Dr. J. H. Rauch, of Springfield, Illinois; Dr. J. K. Bartlett and Dr. William Fox, of Milwaukee; and Dr. T. A. Roger, of Montreal.

An ADDRESS OF WELCOME was delivered by Dr. WM. H. BYFORD, of Chicago.

THE PRESIDENT'S ADDRESS.

Dr. ALBERT H. SMITH, of Philadelphia, on Thursday morning, delivered the President's Annual Address, taking for his theme

THE PRESENT ASPECT OF THE PUERPERAL DISEASES.

After referring briefly to the benefits conferred by this Society upon the general field of medicine, not only by its actual work accomplished, as shown by its published Transactions, but also by the deeply-felt influence exerted upon the profession and upon the specialists in its several included lines of work, he passed to a consideration of the advanced condition of gynæcology, and to the comprehensive character of its labors, contributing, as it does, experimental knowledge, manipulative skill, and diagnostic accuracy, which are utilized in other departments of the art of medicine. Surgery especially is indebted to the labors of gynæcologists for extending by new operations its field of usefulness, for many ingenious instruments, and for the introduction of new methods of treatment which have added greatly to the means of the successful treatment of disease and injury. In abdominal surgery, the gynæcologist has had, from the beginning of its history, absolute control of the field, so far as the mass of work, the attainment of success, and the teachings through the medium of published results are concerned. Beginning with the surgery of the reproductive organs of woman at the pelvic brim, he has gradually been put in charge of all intra-abdominal diseases requiring surgical interference, without regard to sex or organ, and the operator who has established a reputation in ovariotomies and hysterectomies is now sought out for man, woman, or child upon whom an abdominal section offers the least hope of relief. Cases suggesting nephrectomy, nephrotomy, carcinomatous obstructions, invaginations, hydatids of the liver, cholecystotomy, all seek relief from the gynæcologist rather than the general surgeon. He himself had seen a man about to be discharged from the Woman's Hospital, Birmingham, having been successfully operated upon by Mr. Lawson Tait for biliary obstruction. Where, indeed, he asked, in the whole realm of general surgery can a claim be presented of statistics showing the barest approach to the actual life-saving operations or operations for restoration to usefulness of the maimed and helpless, as in the little domain of gynæcology?

The high standing of gynæcology and its services in the past invest the laborers in this department with special responsibility. He inquired whether or not the gynæcologists of America are sustaining their reputation by original work, by a high standard of literature, by maintaining an elevated tone in their department of medicine. He particularly urged upon the members of the Gynæcological Society attention to these important matters. He had been humiliated by the remark made last year by some transatlantic brethren, that a lowering of moral tone was observable in this country in the press and in the amphitheatre, and almost entirely in the productions of gynæcological writers and teachers. "We find in our best conducted journals articles devoted to subjects connected with the sexual relations, entering into minutiæ upon matters of no scientific value, and without special interest in themselves,

and rendered valueless, at any rate, by the character of the media of information through which these asserted facts are derived,—articles which can have no effect but to minister to a prurient and depraved taste, from which the members of our noble profession should be absolutely free. We find also articles coming from the pens of specialists in obstetrics and gynæcology attempting professedly to be moral homilies upon the family relation, based mainly upon the most exceptional extremes of married life, often the product of a morbid imagination in the writer, and being in themselves not only devoid of scientific bearing, but full of gross indecencies vulgarly told, and utterly unfit for the perusal of any class of readers."

Regarding this as one of the evidences of failure in earnestness for fair, honest work, he begged the Fellows of the Society to use all their influence to stop the flow of this foul current, which lowers the standard of purity of thought and befouls the sacred profession of medicine. There can be no fact in true science which cannot be fully developed by a man of pure mind without a shock to the most delicate: true science is embarrassed, not aided, by anything coarse or indecent.

The main subject of the address being the zymotic diseases, the speaker referred to the historical discussion which had taken place last year between Drs. Thomas and Barker, at the New York Academy of Medicine, upon "Puerperal Fever," and said that these two representative men might be considered as the exponents of two hypotheses as to the etiology of the disease, the one holding to "absorption" and the other to "essentiality," and, of course, advocating different methods of treatment based upon these views. In order to discuss the subject intelligently, he formulated the following definition of puerperal fever:

Puerperal fever is "a febrile condition occurring in a woman from two to four days after the termination of pregnancy, either at full term or prematurely, characterized by typhous symptoms, high temperature, and frequent pulse, the rapid formation of local centres of inflammation, suppuration and gangrene, metastatic abscesses, emboli, a violently phlogogenous condition of the blood, and, unless arrested, running on rapidly to disorganization and death." He believed that this definition would be accepted as based upon Dr. Barker's clinical reports of his cases, and yet meeting the demands of his most decided opponents. He then proceeded to consider the actual condition of the woman after delivery, which, if physiological, still is one which is easily converted into a pathological state from the results of traumatism combined with the hyperinosis of the blood and its tendency to determination to the pelvis.

After a review of the doctrine of the essentialists, he declared himself unable to accept the distinctions so carefully drawn by Dr. Barker in his work between the clinical cases of the disease, but saw in Dr. Barker's teachings an argument against crowding and hospitalism, and in favor of prophylactic measures.

Braxton Hicks attributes the puerperal-fever poisoning either to some modification of the scarlatinal or other exanthematous virus through the lungs, and its development after delivery, and, more recently, Dr. Kirkhead, of Galway, has advanced the idea of the interchangeability of all zymotic diseases into puerperal fever, which, after absorption, instead of reproducing themselves, appear with the characters of puerperal fever. As he could not conceive of such a change of type, he passed it without discussion.

He then took up the theories of the "absorptionists," (1) according to Semmelweiss (1847), who regards puerperal fever as a surgical fever, due to traumatism and septic purulent infection, or (2) according to Pasteur (1872), who attributes it to specific micro-organisms: in the words of Paul Bar, "No microbes, no puerperal infection." After a thorough consideration and comparison of these two schools of "absorptionists," a review of the phenomena presented by typical cases of the disease, and its pathological anatomy, he expressed his conviction that the teachings of Semmelweiss were more nearly conformable to the facts than those involving the specific germ, but still, in his own language, expressed a willingness, "when any one by repeated experiment proves the exact nature of the *causa morbi* present in every case, and never found except under conditions of similar character, then I will accept the *corpus delicti*, even if it be Pasteur's diplococcus and *microbes en chapelet*, and honor him the more for his pertinacity in maintaining his ground." In the same position as himself stand our principal English and American teachers,—Playfair, Leishman, Simpson, Goodell, Howard, Chadwick, Engelmann, and, less positively, Dr. Thomas and Dr. Barnes.

He then proceeded to an exposition of the recent teachings of the specific-germ theorists, and concluded that their claims had not yet been substantiated by actual demonstration. Criticising the statement of Pasteur that a germ cannot enter a healthy body, the blood is "firmly closed" against it, he asked, very pertinently, how can it then be a pre-existing cause of disease in that body? and declared that the woman is already infected who gets microbes into her circulation. That microbes are found in the lochia of every parturient woman no competent observer will deny, but he claimed that "every form that is found in the blood in the most virulent cases is found in the vagina of a healthy woman who remains healthy." He did not, however, wish to be understood as considering

these microbes as harmless: they may be carriers of infection, and they may obstruct the vascular spaces mechanically. He protested, however, against confining our attention to the microscopic examinations of the lochial discharges, when they should be given to the general condition of the patient. As to treatment, he advocated the methods endorsed by experience, rather than the new methods based upon antiseptic theories. He avoids overcrowding, and insists upon strict cleanliness and the use of vaginal douches of carbolized water, or, preferably, good fresh Labarraque's solution, or of hot water, 115° F., with mercuric bichloride 1 to 1000. He had no fear of intra-uterine injections, and always used them where there are any clots in the uterus or there is undue patulousness of the os uteri. There should be no air in the syringe to pass into the veins, and if there is a proper provision for the return of the fluid none of it will penetrate the oviducts. He has never seen any alarming symptoms after its use, and, on the contrary, praises it highly for its antiseptic effects and recommends it to his classes.

He also exhibited several glass tubes for intra-uterine irrigation. Each tube was about fifteen inches in length, closed at one end, the calibre being about two-thirds of an inch. The rounded end of the tube was perforated by a number of holes, for the escape of the fluid from the uterine cavity, which was to be injected through a soft-rubber catheter passing along the interior of the tube and through a terminal aperture. The glass tube could be made perfectly aseptic, while the rubber tube should be renewed each time it is used. He had employed such tubes, extemporaneously made, in his practice with satisfaction.

SCIENTIFIC PAPERS AND DISCUSSIONS.

Dr. JOHN C. REEVE, of Dayton, Ohio, read the first paper presented before the Society at the meeting on Tuesday morning, entitled

MOOT POINTS IN REGARD TO INVERSION OF THE UTERUS.

The progress of our knowledge with regard to inversion of the uterus, he said, had been very slow, chiefly, it was believed, on account of the rarity of its occurrence. Its infrequency may be judged from the fact that West did not meet with a single case in a total of one hundred and forty thousand labors; moreover, they happen mostly in the hands of midwives and unskilled observers, or of young practitioners, and under circumstances not favorable to careful observation. This also constitutes the stronger reason why their conditions have not been better studied. The accident was known to and described by the ancients. With regard to the etiology of inversion, some progress has recently been made, and it is now better understood than formerly. It was the custom to attribute the condition always to ignorance, and unskilled manipulations, of the midwife in delivering the placenta; now it is known that it may be due to muscular action of the uterus, without any aid on the part of the accoucheur whatever. Can inversion of the uterus occur entirely independently of pregnancy or of polypus in the nulliparous organ? It is generally supposed to be due to some change in the wall or the contents of the uterus. Pregnancy and polypus undoubtedly favor its development; but the question is, whether or not there are other conditions which may also be the cause. Hydrometra has been assigned as a predisposing cause by Courty, and one case apparently due to hydatids has been reported. It is admitted that with a healthy condition of the uterus this accident is impossible. Its occurrence independently of pregnancy is also accepted by Courty, Madame Boivin, and other distinguished authorities; by others, however, the inversion of the nulliparous uterus has been doubted, and it is denied by Matthews Duncan, West, and others. The chief objection of Matthews Duncan is that the wall of the uterus is too thick and muscular in virgins,—that it cannot be depressed or dimpled so as to admit of inversion. But this really begs the question, because it applies to the normal condition only; and the possibility of its occurrence, on the contrary, can be proved from the writings of Dr. Duncan himself. He has described changes which he has frequently encountered in the virgin uterus, where there has occurred a thinning of the walls as a result of pathological conditions where the walls were very much reduced. This condition—abnormal, it is true—is certainly favorable to the development of inversion, and it is not unfrequently found after operations for the removal of intra-uterine growths. He quoted three cases in support of this view. The first was reported by Baudelocque in 1790, the patient being fifteen years of age, which established the occurrence of inversion of the nulliparous organ. Case II. was reported by Beyer, in a woman aged forty-four years, and the third case was published recently by Gaillard Thomas. This case occurred in the practice of the late Dr. Willard Parker. The woman had had several children, and was supposed to have polypus; but upon removal of the tumor it was found to be the inverted uterus. The patient recovered.

Thus there are fair arguments in favor of inversion occurring in the absence of pregnancy and polypus, due to abnormal conditions of the nulliparous uterus.

The second question he propounded was with regard to the starting-point of the inversion: does it always begin at the fundus? This appears to be the generally accepted view; but may it not occur in a reverse way, from the cervix being relaxed and open and the organ gradually everting? Dr. Thomas claims that this has not been proved, and it

has been denied at a meeting of this Society by Dr. Taylor. A case was quoted from Klob, but upon referring to the original it seems that Klob referred to Tyler Smith.

He had not been able to find it in the published writings of Tyler Smith, but Dr. John H. Tate, of Ohio, who was a student and great admirer of Tyler Smith, had referred to it in a paper on this subject. and probably learned it from him. The process is very much like that which occurs in prolapse of the bowel,—a hollow organ rolling outward through its inferior outlet owing to pressure from above.

Dr. Tate, in his paper, communicated the notes of three cases which did not fit into any of the prevailing doctrines whatever. A case has also been recently met with by Dr. Araminta V. Scott, of Philadelphia, and reported by her, so that there seems to be sufficient evidence to support the proposition that inversion may begin at the cervix.

The third query he propounded was, Does puerperal inversion of the uterus occur except at the time of delivery or immediately afterwards? This question is an important one, because it affects the responsibility of the accoucheur. Suppose a woman has been attended through the usual course and has been dismissed as well, and some few days afterwards, while sitting up, perhaps straining at stool, she feels something give way, and an examination reveals an inverted uterus. The question is, did this begin at the time of labor, and was it overlooked by the attendant, or was it an after-occurrence? When inversion, partial or complete, occurs at the time of labor, the usual symptoms of inversion, hemorrhage and nervous shock, should be present to direct attention to the accident; and repeated hemorrhages within the first few days after confinement should suggest this possibility to a young physician, who is to blame if he neglect a vaginal examination, when the condition would at once be recognized. He recalled a case occurring twenty-five years ago in his own practice. Mrs. M. complained of pain in her side during her labor, which was rather a difficult one. After delivery, the uterus could be felt, as usual, above the pubes. On the fourth day she seemed to be doing well, on the tenth she was discharged. On the eighteenth day he was sent for on account of her having had some fresh hemorrhages; he found an inversion of the uterus, which he reduced three months after delivery. He regarded this as a case in which the inversion did not occur at the time of labor, but some time afterwards. The next case was reported by Dr. Delamater, from the practice of Dr. Sayles. It was a second labor. Apparently nothing unusual occurred, as the doctor was only called to remove the placenta, after doing which there was pretty free hemorrhage, which, as she had had hemorrhages before, did not excite apprehension. The uterus was in good position. For several days a catheter was used, but otherwise everything appeared to be normal until the tenth day, when the patient experienced an irresistible tendency to bear down, and, as the result, a tumor protruded from the vagina, which was recognized as the inverted uterus, and which was afterwards successfully reduced. In Case III. it was a twin labor; the patient was apparently well until the eighth day. On the next day she had a tumor like the preceding one, which was found to be an inverted uterus. Case IV., having been doing well, on the eighth day got out of bed to evacuate the bowels. A tumor protruded from the vagina, which was recognized as the uterus nine months afterwards and successfully reduced. In Case V. the inversion occurred on the fourth day; in Case VI., with the first labor inversion occurred, and again in the second and third labors; the uterus was in good position on the sixth day, but afterwards inversion occurred, which was subsequently reduced. Case VII. also had an inversion, occurring on the ninth day, the patient having been doing well up to this time. This was also successfully reduced.

With regard to the predisposing causes of inversion, it is observed that relaxation of the uterus after delivery is very common, and inversion under such circumstances is not only possible, but probable.

May it occur without giving rise to symptoms that would indicate that something was wrong? In most cases the shock, paleness, profuse hemorrhages, indicate to the friends that everything is not right, and in seventy-eight out of one hundred and twenty-eight cases a fatal termination occurred in a few hours. Two cases were quoted in which the patient seemed comfortable and there was no excessive bleeding. In one the uterus and its contents were forced out between the labia by one severe pain; the placenta was peeled off, the uterus restored to its position, ergot given to retain it in place, and the patient seemed to suffer no inconvenience.

The last difficulty to consider is one of diagnosis. Sessile polypi and inverted uterus might be confounded; the history of the two conditions is of no aid whatever in diagnosticating them, as they are so nearly alike. The only safe rule is to bear in mind that such a tumor may be an inverted uterus, and to use appropriate treatment after a careful examination.

DISCUSSION.

Dr. SCOTT, of California, said that, in a long experience, he had had only two cases of inversion of the uterus. One occurred during the early years of practice, coming on during labor in a young woman; it was reduced very speedily by manipulation. The second case occurred only last year. She was brought to him from Sacramento to San Francisco, having been under the care of a

homœopathic medical man. She reported that the child was not unusually large, and the labor was an ordinary one, but the doctor seemed in a great hurry to get away the placenta, which came away suddenly, with a gush of blood; during the next three weeks there were repeated hemorrhages. Her medical attendant recognized the case as one of inversion of the uterus, and tried, though unsuccessfully, to reduce it, and another irregular made the same diagnosis, but did not attempt its reduction. The remarkable feature in the case is that this patient had for the next seven months inversion of the uterus without hemorrhages, although she had pain in the back and most profuse leucorrhœa. In the eighth month she weaned her baby, and the hemorrhages immediately began again. The speaker examined her and restored the inversion in about twenty minutes by the usual method, by manipulation, first indenting one cornua, then the other, and gradually pressing the fundus through the cervix. In the process he could feel the muscular fibres yielding; some of them were torn. After the uterus had been restored, he examined it from day to day, and found that the os remained patulous; there was no tendency to contraction; the patient felt perfectly well. Iodine was applied for three weeks without much effect; then the menstrual period came on, followed by hemorrhage, continuing for ten days. An examination showed the uterus in place, but the cervix dilated as before. Applications were again made, but after the next period it was found that nothing had been gained. He then retrenched the calibre of the cervical canal by putting in some silver-wire sutures, which set up a cellulitis. The patient afterwards recovered, became pregnant, was delivered of a child, and he was called upon to operate for a rupture of the perineum. He reported it in order to call attention to the persistent patulous condition of the cervix.

Dr. William H. Byford said that the paper merits more notice than it could receive in a short discussion. The main points for discussion are the method of inversion of the uterus, its causes, and the times when it is likely to occur. With this accident he had not had much experience personally, although in consultation he had seen nine or ten cases, two or three being acute. Some years ago he had published a case, which occurred in 1870 in his own practice, of a very healthy young Jewish lady of this city, at her second confinement. The labor was not a marked one in any respect, and there were no untoward symptoms. He followed his usual custom after labor, and examined the uterus through the abdominal walls. He found it in good position, not altered in shape, and certainly not in position. There was no hemorrhage, and, in fact, no symptoms to indicate anything extraordinary. He could recall no circumstance afterwards during her confinement in bed to excite suspicion. Four or five weeks after her confinement he went to California, and was absent two months. Two or three weeks before his return, this patient had to call in another physician of this city to see her, who, upon examination, found an inverted uterus: there was complete inversion. He was astonished and perplexed to hear of this, and to think that he possibly might have overlooked a complete inversion. Now, it is noteworthy that, from the time of her labor to the time that this physician was called to attend her for a slight hemorrhage, there had been nothing to point to anything unusual. This patient had been nursing her child, also, until about two weeks before the occurrence of this accident. Owing to some sickness on the part of the child, the nursing was interrupted, and the hemorrhage began. It often is the case that pelvic disorders first make their appearance by symptoms after weaning the child.

In reply to a question, he said that such an occurrence had been the ground of a trial about twenty-five years ago. Dr. Fisher attended a case, and had in consultation with him Drs. Davis, McVicker, and others. The patient subsequently was found to have inversion of the uterus, which the husband attributed to unskilful attendance. Being an irascible man, he pursued Dr. Fisher, and tried to ruin his reputation, on account of his supposed neglect. Dr. Fisher sued him for damages for defamation of character, but did not gain the case. The affair ruined Dr. Fisher in Chicago.

Dr. Browne reported a case which was taken with hemorrhage on the ninth day after delivery, and inversion was discovered and put in place. In this case there was an ulcerated cervix, and probably the inversion had occurred from below. In cases where the uterus follows the placenta, the inversion is generally recognized at the time. We know how difficult it is to invert the uterus in cases of operation for removal of a sessile polypus; and in similar cases it seemed to him that the true explanation of the inversion is that it occurs from below.

Dr. Dunlap referred to a case of chronic inversion of the uterus which had come under his care, with a history of hemorrhages after labor, but no abnormality of the uterus was discovered upon repeated examinations until some months afterwards. Then the os was seen to be in a state of dilatation, and through it the uterus slowly descended until the fundus was in the vagina. The point of this case consists in the fact that at first the os was closed, and several months afterwards, with obstinate hemorrhage, there was found dilatation of the cervix and descent of the fundus. In this case inversion occurred at the fundus, and not at the neck or the os.

Dr. Sawyer had a fatal case of puerperal

inversion to report. There had been extreme dilatation of the uterus by dropsy of the amnion. The uterus was flabby, and walls deficient in thickness. The fundus was above the umbilicus, and there was some difficulty experienced in delivering the placenta, although, after evacuation of its contents, the uterus appeared as if it were normal, except that the fundus was a little higher in the abdomen. The husband was asked to place his hand over the uterus while the relator changed some clothing: now a gush of blood was noticed, and a drachm of ergot was given. Upon taking the place of the husband, it was found that the uterus had disappeared. The time in which the dimpling and inversion had occurred was not more than ten minutes altogether. During the efforts at reduction, the organ became hardened, probably from the ergot, so that it was impossible to reduce it; the patient became collapsed, and died in three hours. At the post-mortem, a condition was found which throws some light upon the method of production of inversion. The area of placental attachment was near the right cornua; the uterine wall was large, and much thicker here than elsewhere. There can be no doubt that this portion of the fundus fell in from the force of gravity, and he was prevented from reducing it by the uterus being ergotized, ergot having been given to stop hemorrhage that was threatening life.

Dr. H. P. C. Wilson said that he had been most interested in the length of time which inversion had occurred after labor. Inversion never occurs at any time after confinement without the physician getting the blame for it. He had seen but one case in his life of acute inversion after labor. It occurred in the hands of a very distinguished practitioner, and was brought to the reporter six months later. It was reduced without special trouble. It would seem that everything which produces relaxation of the uterus or favors subinvolution, or anything which prevents the uterus from resuming its normal condition, may produce inversion at any time, as long as this condition remains, whether one week or ten after labor. Anything which causes relaxation of the muscular walls under these circumstances, such as over-exertion, may cause inversion.

Dr. Howard had seen only three cases. He was called to a fourth, but had not been able to attend it. In the first case, the midwife had delivered the placenta by pulling upon the cord, producing complete inversion of the uterus. The temperature of the woman when he saw her shortly afterwards was 103° F., pulse 120. The organ was replaced by manipulation, and the patient did not have a bad symptom afterwards. The second case was a young mulatto woman, who had been exhausted by repeated hemorrhages and leucorrhœa, due to polypi, which being removed with the écraseur without loss of blood, the uterus was found completely inverted. The attachment of the polypi was seen to be to the fundus by pedicles. The third case was also one of complete inversion, supposed to be a prolapse. She refused operation. The last case was one which he had seen about a year ago. She was sixty years of age, and had complete inversion with a polypus. In consideration of her age, no recommendation was deemed necessary.

In a case where a polypus was attached by a long pedicle to the fundus, he had inverted the uterus by delivering the tumor with the forceps, and immediately restored it again. Now, if the uterus can be inverted by traction and reduced immediately afterwards, it seemed reasonable to him to believe that in a woman who has never borne children the uterus may be inverted by the constant traction of a polypus. In conclusion, he referred to the discussion on this subject before the International Medical Congress held in Philadelphia in September, 1876, when Dr. Washington L. Atlee handed around a specimen of a portion of an inverted fundus uteri, which he had removed with the écraseur under the idea that it was a polypus.

Dr. H. P. C. Wilson, of Baltimore, read a communication on

FOREIGN BODIES IN THE ABDOMEN AFTER LAPAROTOMY.

The possibility of allowing some of the instruments or a sponge to remain in the peritoneal cavity constitutes one of the great dangers of laparotomy; and this accident occurs more frequently than might be supposed from the records. The foreign body is sometimes discovered during life, sometimes only after death; sometimes it fails to be discovered at all. Unfortunately, most of the fatal cases have not been published, because they would do damage to the surgeon in the neighborhood in which he lives. Moreover, in a great many cases he is unable to obtain a post-mortem examination, and the diagnosis of septicæmia, peritonitis, etc., is usually considered sufficient, and it is never learned whether or not there may have been a sponge or a pair of forceps at the bottom of it.

Notwithstanding the difficulty of getting statistics of this accident, he had been able to get records of twenty-one cases, of which only five have been published; *i.e.*, more than two-thirds of the cases never come to light. Counting his own case, which he published to-day, there were six published. In five the foreign body was a sponge; in one, a pair of forceps. Four perished; two recovered, after timely removal of the sponge.

In his own case, when the wound was nearly closed, an assistant told him that a sponge was missing; but on counting them over, the nurse said that they were all accounted for. The patient made a good recovery, except that an abscess appeared on the anterior abdominal wall, which pointed

and discharged pieces of sponge six months later. The fact that the sponge had been thoroughly cleansed and asepticized probably saved the patient's life. He was entirely unable to account for its presence in the abdomen. In a case of Lawson Tait's, a bystander, becoming interested in the operation, assisted, and tore a sponge in two, and, without saying anything about it, he left the room before the sponges were counted. The number was correct, but the half-sponge left in the abdomen killed the woman. Spencer Wells reports a similar case, in which he was obliged to partially reopen the abdomen twelve hours later: he removed the sponge, and the woman did not seem any the worse for it. In another case, Spencer Wells, making some excuse, removed two stitches in order to find a pair of forceps, which were subsequently found rolled up in the mesentery. The patient got entirely well, and never found out anything about it. Carl Braun reports a case of a sponge, and Gustav Braun one in which a pair of forceps were allowed to remain.

In order to avoid such dangerous and disagreeable accidents, he urged that the number of sponges should be as limited as possible. The sponges should be selected on account of their strength, as well as their texture; they should not be too small, and should be whole, never cut or torn; they should not be used if old or friable. The instruments should also be large, because small ones might be overlooked. There should not be too many assistants: he would rather have one than three, and rather none at all than five. Both sponges and instruments should be entered upon a written list before the operation, and the surgeon should himself verify the count before closing the abdomen. The operator should do his own sponging during the operation.

DISCUSSION.

Dr. THOMAS said that the subject as presented by the lecturer was interesting, and the paper was characterized by frankness and an evident desire to avoid doing injury to patients. He thought, however, that the frequency of the accident had been overestimated. In his own experience of laparotomy, of between four and five hundred cases, there had been only one case that he could recall, and this he desired to mention as an addition to those in the paper, and as an illustration of the unaccountable manner in which this accident may occur. A patient in the Woman's Hospital, New York, suffering with cancer of the spleen and Bright's disease of the kidneys, had a tumor in the left side of the abdomen, and, although the case was a hopeless one, at the request of the patient's friends an exploratory incision was made. During the operation he did not have a sponge in his hand, and his assistant, Dr. Hunter, used only one sponge. The patient was under ether, as at that time he had not yet recognized the danger of giving ether in Bright's disease, which sometimes is followed by complete suppression of urine. It was so in this case: after the operation the patient did not secrete a drop of urine, but succumbed in a few hours. A small piece of sponge was found in the abdominal cavity, which had probably been broken off from the large sponge while it was being used in the peritoneum, and dropped inside.

Referring to the recommendations given in the paper, he said that he thought it impossible for the operator to do his own sponging, especially when there is a great deal of hemorrhage, or when he has to do some careful dissecting and differentiate the tissues, which would require sponging to keep the field of operation clear. He must, therefore, trust his assistants with the sponges; but he should see that nothing remains in the abdominal cavity. He has only three assistants, uses very few instruments, which are large, and his sponges have pieces of tape (five or six inches long) stitched to them to prevent their being overlooked. One assistant has charge of the instruments, and accounts for them all after the operation; a second assistant administers the anæsthetic; the third assists in the operation directly. The only way to prevent leaving instruments in the cavity is to use as few instruments as possible and let them be of large size. He had great dread of seeing Péan's forceps used, as they are generally allowed to remain temporarily in position, in order to check hemorrhage, but they might easily get lost. While such accidents do occur occasionally, he would not deny—in fact, he fully agreed with Dr. Wilson—that if all the cases were faithfully reported there would be a great many more than there are.

Dr. A. REEVES JACKSON said that having his attention directed to the subject he had found, upon inquiry, that there had been at least three unpublished cases in Chicago (two of sponges, one of forceps), and the fact discovered only after the death of the patients. He approved the sentiments and recommendations of the paper, which were very nearly his own rules. He thought that the case of Dr. Wilson fully demonstrated the value of antiseptic sponges.

Dr. DUNLAP had not had this accident occur, to his knowledge, in any patient of his. He uses very few instruments and does his own sponging. He thought Dr. Thomas's plan a good one. His own preference was for a very large blanket sponge, which he packed in over the intestines to keep them out of the way. He always has his patient in a half-recumbent posture during the operation, so that the fluids may gravitate to the posterior cul-de-sac. He has no dread in making an external incision large enough to permit him to explore the abdominal cavity. Having it open before his eye, it is impossible

to leave a sponge in unnoticed. The only danger is from Péan's forceps, and he prefers to apply a ligature at once to letting go of the forceps. He never passes a vessel until the bleeding is stopped, and he does not close the wound until the cavity is perfectly dry. He recommends large incisions, and said that in all his laparotomies he had never failed in obtaining union in three days' time.

Dr. HOWARD said that he was struck with the manner of counting the sponges in the Good Samaritan Hospital in London. Two women have charge of the sponges,—say fifteen in all. After the operation, one woman picks up the sponges one by one and counts them aloud, handing them to the other nurse, who also counts them aloud as she receives them, which prevents any mistake in counting. While in London he learned of a case of a young woman, nineteen years of age, who, after ovariotomy, complained of so much pain that a young surgeon in the hospital opened the wound and removed a sponge, and the patient recovered. Another distinguished operator opened the abdomen of a patient on account of pain, which he feared might be due to a sponge, but he could not find any: this patient died. With regard to Dr. Thomas's remarks about the danger of ether in Bright's disease, he thought that this was also the case with chloroform, and that deaths under such circumstances had been published. He had himself a case of a young colored woman who died of cardiac paralysis after the inhalation of less than thirty minims of chloroform in a Junkin's inhaler: after death the kidneys were found diseased.

Dr. THOMAS said that the case was not analogous. He had referred to suppression of urine after the use of ether, which did not occur with the chloroform.

Dr. ENGELMANN reported a case of laparotomy for fibro-cystic tumor of the ovary, where a sponge was left in the abdomen by a visitor who usurped the place of the regular assistant, and who afterwards corrected the assistant, who reported a sponge missing, by the assertion that it was all right, and must have been thrown out with some waste water. As no sponge could be detected in the pelvis, the wound was closed. The patient did well for two days, and then sank, with peculiar symptoms of dementia, or melancholia; she did not complain of pain in the abdomen. At the post-mortem, a small sponge was found lying between the stomach and transverse colon, mainly on the right side. There had been no inflammation around the sponge, which was perfectly pure and clean; there was a slight injection of the small vessels in the immediate neighborhood of the sponge. This case is of interest because the list is so small. It occurred because of the interference of a guest, and the deference due him as a distinguished surgeon prevented a remonstrance, and the manner in which it happened was this: in order to stop rather free bleeding, the visitor packed several sponges in succession into the abdomen in order to check it: one of these sponges was left.

Dr. MUNDÉ endorsed the caution with regard to old and friable sponge. His own rule was not to use sponges that have been long kept (antiseptic fluids usually make the sponge brittle), nor would he use one which has been cut or torn. He considered it advisable in the last steps of the operation to have as many sponge-holders as sponges, to use in taking the fluids from Douglas's cul-de-sac.

Dr. BAKER had expected to hear discussed in the paper another class of foreign bodies in the abdomen,—viz., sutures and ligatures. He had met with several cases in which ligatures, after giving considerable trouble to the patient, had gradually worked their way to the surface.

Dr. WILSON closed the discussion by approving most of the suggestions, and stated that the cases must be more frequent than some supposed, for, since writing his paper, he had learned of seven more cases.

Dr. C. D. PALMER, of Cincinnati, read a paper entitled

ABDOMINAL SECTION: ITS VALUE AND RANGE OF APPLICATION AS A MEANS OF DIAGNOSIS AND TREATMENT.

After referring to the value of diagnosis in medicine, he spoke of its especial importance in pelvic and abdominal disorders in women, and cited instances where circumstances prevent a positive conclusion from being drawn, —*i.e.*, some cases of ovarian cyst, effusion in the Fallopian tubes, cancer, and other growths which may be complicated by ascites. Sarcoma of the mesentery is likely to be taken for ovarian cysts. Neither the external character of the tumor, its relation to the intestines, nor functional disturbances of the kidney or other organs can be relied upon to establish the diagnosis. Renal tumors or floating kidney may have the intestines above them, and may be as movable as ovarian growths. Extra-uterine pregnancy also has simulated ovarian tumor. Although there is so much difficulty in diagnosis, it must not be inferred that many mistakes are being made in this department; on the contrary, it is surprising that they are so rare. Ovarian diagnosis is steadily increasing in accuracy. Spencer Wells has said that ovarian diagnosis has reached a degree of perfection as great as any other department of surgery.

Great stress has been laid upon tapping in the diagnosis of abdominal effusions; but, while some insist on its value, others never perform it. Probably the safe ground lies between the two extremes: it may clear up the diagnosis, but, on the other hand, how

many promising cases ready for ovariotomy have been spoiled by injudicious tapping! Spencer Wells estimated that tapping increased the mortality after ovariotomy two per cent. It is an operation of no small risk, in his estimation, and should be omitted, for the diagnosis can be made without it by means involving less risk. Schilling says that tapping is a crime. Stone never taps. Lawson Tait insists that it should never be done for diagnosis. He concluded (1) that tapping in the large proportion of cases is unnecessary, and is superfluous for the purpose of diagnosis; (2) that it is attended by such risk and dangers in its remote effect as to limit its use to a minimum. Spencer Wells limits it to the case of parovarian cyst; but the simplicity of the operation is likely to lead us to underrate its danger. The evidence afforded by the chemical, microscopical, and physical examination is only presumptive, and not positive.

With regard to opening the abdomen, which is generally regarded as a serious operation, he believed its danger was in proportion to the amount of handling to which the viscera were exposed, and the size of the external wound. After referring to the favorable reports of Spencer Wells, Dr. Byrd, and Dr. C. C. Lee (the last-named of whom had seen five cases in which the operation of laparotomy had been begun, and abandoned after opening the abdomen, all of the five recovering), he said that his own experience had been limited to five cases of exploratory incision where malignant disease was suspected and found. In four cases death occurred in from four to thirty days; the other is still living, sixteen months after operation. In cases of malignant disease with very little vitality, the shock of opening the abdomen very often will prove fatal; but in other cases exploratory section may be practised with as good results as tapping. He repeated Lawson Tait's warning against turning an exploratory incision into an incomplete operation, for the mortality in abandoned operation is very much greater than in simple section.

In a certain sense every abdominal section is diagnostic, because no one can tell positively, until the abdomen is opened, what the character of the tumor may be or what complications may exist affecting the question of operation. It is no reproach to a surgeon that he suggests an exploratory incision in order to complete his diagnosis; but it should not be resorted to except in cases where a surgical procedure is likely to be called for, and this contingency is to be provided for in case the abdomen is opened. Early interference gives the best results, and is the order of the day. The incision should be at first small, and may be afterwards enlarged according to the necessities of the case: by opening the abdomen the operator learns the character of the growth, whether malignant or not, its site and attachments, and is able to decide the question whether removal is possible, and, if so, whether it will prolong life. As the rule, no operation should be performed in malignant disease.

There are many conditions which can be relieved by the operation in which exploratory incision for diagnosis is not required:

1. For the detection of simple ovarian tumors; but such tumors are not always uncomplicated, and exploratory incision may be of service where it leads to early operation.

2. For the diagnosis of some interstitial and extra-uterine fibroids; but where life is threatened and surgical interference is needed, the section may be made to verify the diagnosis and enable the surgeon to decide between oöphorectomy and hysterectomy.

3. In certain cases of acute and chronic peritonitis, where the patient is threatened with septicæmia. If the abdomen can be opened, cleansed, and drained, the patient is in a fair way for recovery.

4. In certain obstructions occurring in the intestinal tract, just how soon and how far it is permissible to interfere surgically in such cases is yet undecided; but laparotomy has more than once been of service in saving life.

5. Some cases of chronic pelvic abscess are susceptible of relief by this means. A very large proportion of these cases result from hæmatocele. Many of these cases recover by spontaneous evacuation through the bowel or bladder. Tapping is the best method of treating such collections; but where the abscess is discharging through several tortuous channels, free opening, cleansing, and drainage are advisable.

6. In extra-uterine gestation, laparotomy should be practised early if the fœtus cannot be destroyed by electricity. When the fœtus is fully developed, it becomes a necessity.

DISCUSSION.

Dr. ENGELMANN said that the exploratory incision had been too little used in this country for diagnostic purposes. He would not regard it as a means of ordinary diagnosis, as he would bi-manual manipulation; but where the diagnosis is doubtful, the term exploratory incision will often aid in getting out of it if the case is not a suitable one for operation. He does not regard it as being as dangerous as tapping. He recalled three cases in which he had performed exploratory incision, all of whom got well. The first was one of uterine cancer, which seemed favorable for hysterectomy; but after opening the abdomen the disease was found in the neighboring structures, and the operation was not performed. A second was of similar character; and in the third the malignant disease seemed generally diffused.

Dr. MUNDÉ said that exploratory incision, not only in suspected ovarian diseases, but in abdominal disorders, had not been as much

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resorted to as it should have been. At the commencement of the operation the majority of ovariotomists make a large incision, with the expectation of going right on with it, and with the feeling that, having begun the operation, they do not like to back out of it; they go on to finish the operation, even if it also finishes the patient. He agreed with the lecturer that the exploratory incision is rather a safe procedure, and not so dangerous as tapping. He believed that tapping was responsible for twenty-five per cent. of the mortality after ovariotomy, and the risk is greater than from the ovariotomy itself. He has now under treatment a large uterine myoma, for which he proposes, within a month, to make an exploratory incision, and afterwards determine whether to remove the uterine appendages or perform hysterectomy. In a case of pelvic abscess he preferred to aspirate, and, finding pus, to make a free incision in the roof of the vagina, tie any bleeding vessels, pack the cavity, and the patient usually gets well. He only differed from the speaker in calling this an exploratory incision, agreeing with him as to after-treatment.

Dr. WILSON regarded every laparotomy as an exploratory incision: he never knows exactly what he has until he opens the abdomen. It is not so dangerous as tapping. In a case of amniotic dropsy with great abdominal distention, although he was aware of the existence of pregnancy, yet the effusion was so great that he did not know whether it might not be ovarian tumor or ascitic fluid. After deliberating whether to open the abdomen or to put in a trocar, he decided to make an exploratory incision, and found a very large uterus, the walls not being any thicker than an ordinary cyst of the ovary. If a trocar had been used, it would have gone immediately into the uterus. As it was, he closed the wound, dilated the mouth of the uterus, ruptured the membranes, and gave exit to several gallons of fluid, delivered twins, and the woman got well. In closing, he repeated that every laparotomy is necessarily an exploratory incision.

Dr. MAURY said that he had had two abdominal sections for exploration. The first was supposed to be a multilocular ovarian cyst, and there seemed no doubt about the diagnosis, but the incision showed it to be a tumor of the mesentery. The wound was closed, and the patient recovered and lived for a year afterwards. In the other case, a large myoma filled the entire pelvic cavity. The question of removing the ovaries was considered. Upon opening the abdominal cavity it was found to be impossible to remove the ovaries. The operation was given up, and this patient also recovered.

Dr. JACKSON said that the paper had a wider range than the discussion. He would like to hear the experience of the Fellows as to the value of abdominal section for pelvic abscess.

Dr. DUNLAP reported a case of a man, a physician, who came under his care, suffering with commencing psoas abscess. An exploratory incision in the median line, below the umbilicus, revealed the abscess, which was opened and washed out. The patient recovered.

Dr. SCOTT also recalled a case of pelvic abscess, in which the operation was delayed by the refusal of the patient. Finally the abdomen was opened, and it was found that a communication had been formed between the abscess and the large intestine. The result of the operation was very favorable. Obstinate vomiting at once ceased, the condition steadily improved, and the opening in the bowel probably closed, as the patient got entirely well. In another case, drainage by the vagina failed to empty the collection, and abdominal incision was resorted to, and the original cause of the trouble was found to have been a suppurating salpingitis, the cellulitis having been secondary. The patient, before the operation, had been suffering with septicæmia, and died two days later. If the abdominal incision had been made early for diagnostic purposes, the patient might have recovered.

Dr. PALMER closed the discussion by repeating some of the points in his paper. With regard to chronic pelvic abscess he said that simple exploratory incision is a matter of duty on the part of the attendant, especially when the track is long and tortuous, and when it cannot be reached from below. In conclusion, he recommended the more frequent performance of laparotomy, both as a means of diagnosis and for the purpose of opening methods of treatment which otherwise would be impossible. He would not recommend it in marked malignant cases when the vital powers are low.

Dr. ENGELMANN, by permission, stated that in a case of malignant disease operated upon by him the union was by first intention, and the patient rapidly recovered from it.

Dr. PALMER repeated that in four cases under his care of malignant disease the patients died in from four to thirty days after the operation.

Dr. PAUL F. MUNDÉ, of New York, read a paper on

CERVICAL FIBROIDS AS A CAUSE OF DYSTOCIA, AND THEIR REMOVAL BY VAGINAL ENUCLEATION.

The usual site of fibroid growths is in the uterus rather than in the cervix; but they do occur in this situation, and, like other fibroids, they grow rapidly during pregnancy. They may grow so large as to fill the upper portion of the pelvic canal and make delivery extremely difficult; and, when so large, they are apt to be partly corporal and partly cervical. The tumor may descend in front of the head of the fœtus, and may be so contused as to

slough off, or its size may be so reduced by hemorrhage and pressure as to allow it to retire above the brim of the pelvis, and delivery may go on. If the fibroid has a long pedicle, it is easily removed, but the case is more difficult when it is sessile; and it was of this condition that he wished especially to speak. When the sessile fibroid is large, and labor has begun, two plans of treatment are possible: 1, to excise the tumor piecemeal, or, 2, perform Cæsarean section; but the results of this are so bad that the former is preferable. Out of thirty cases, there were twenty-four cases of maternal death, and sixteen of the child. Schroeder showed a mortality of sixteen per cent. The dilatability of the parts at the time of labor is an additional argument in favor of enucleation, and renders the operation more successful than under ordinary circumstances. Dr. Thomas operated upon a woman by Cæsarean section under these circumstances, and the patient died. Afterwards, in speaking of the case, he said that in a similar one he would now try enucleation with the serrated spoon. Where the child is not living or viable, vaginal enucleation would always be preferred. He reported the following case. Mrs. F. F., 38 years of age, married, had her last child a year ago. She had had hemorrhages before delivery (supposed placenta prævia), and bled for five or six months afterwards, and at intervals ever since. She was brought into the hospital with the curious diagnosis of "elephantiasis ossis uteri," whatever that might be. A large fibroid growth was found filling the upper part of the vagina, and the tumor extended up to the diaphragm. Pregnancy was detected, but the tumor so completely blocked up the pelvis that the finger could not be passed beyond it, or between it and the promontory of the sacrum. He did not interfere much with it, for fear of inducing premature labor, which had reached the sixth month. After checking hemorrhage with astringents, the question was whether to operate at once or to delay. Two courses were open: first, to wait, controlling the hemorrhage as much as possible, until labor began, and then to enucleate and deliver, or, if not, to remove the child by Cæsarean section, and finish with Porri's operation, or to perform intra-abdominal enucleation, with abdominal section, by the method of Bryson. In the latter case the chances of the mother would be extremely poor, the mortality being about eighty per cent. Moreover, while waiting, the tumor would have time for still further development, and possibly make Cæsarean section absolutely necessary.

The second plan was to wait only a couple of weeks, and then remove the tumor without interfering with the pregnancy, if possible.

A case of Schroeder's, reported by Loman, his assistant, was almost identical with this one. He performed the operation towards the close of pregnancy, without interfering with it. The success of this case of Schroeder confirmed the lecturer in his intention to operate at once, since the delay until full term would be extremely hazardous.

The operation was accordingly performed, traction being steadily kept up on the mass by two volsella forceps, bringing it down as it was enucleated by the serrated spoon; finally, as the forceps pulled out, he hooked his fingers in the mass and delivered it. The amount of bleeding was slight, and no hemorrhages occurred subsequently. Labor came on shortly afterwards, and he removed the fœtus and placenta and packed the wound with iodoform gauze. The patient did not rally well from the ether, but finally revived after artificial respiration and nitrite of amyl inhalations. There was a temporary rise in temperature for two days, but the patient subsequently did well. The wound was cleansed and again packed on the second and third day afternoon, and less frequently afterwards; it was entirely closed at the end of three weeks, and several weeks later only a slight thickening of the posterior lip of the cervix was present. The tumor, which was presented to the Society, measured twenty inches in circumference, and its principal diameters were eight by six by two and a half inches: it weighed fifteen hundred grammes, or about three pounds.

After a reference to cases published by Playfair, Braxton Hicks, and Loman, he concluded that this case was the largest growth of the kind yet recorded.

So far as can be judged from the description, the size of the tumor in this case is double that of any of the eight cases collected by Loman, and is approached only by Schroeder's, which was six inches long to eight in this one.

To collect the results of these nine cases (only eight of which were available, since Langenbeck's had not been decided at the time of reporting): we find that the mothers all recovered without difficulty. Of the children, three were premature and not viable; one was extracted dead by version, one was perforated before the tumor was enucleated, one was delivered by the forceps asphyxiated (whether resuscitated or not is not stated, but it probably was, or it would have been reported as dead), and two were born alive after enucleation of the tumor,—one by the forceps, the other spontaneously. Thus, of five children, which only can be included in this estimate because they only were viable, three were born alive, or could probably have been born alive if the tumor had been enucleated before perforation was thought necessary, and one died during extraction after version, an operation known to be frequently fatal to the child under any circumstances. Thus, all the children of the cases in which the proper treatment of enucleation was adopted, before attempts at delivery were made, were saved.

Truly, not a bad showing; but how different from twenty-four dead mothers and sixteen dead children out of thirty Cæsarean sections for the same condition!

That the loose connection of these tumors to their envelope during gestation greatly facilitates their enucleation is obvious, and the softness of the mass, also peculiar to pregnancy, allows tumors of even considerable size to be elongated and attenuated by traction, and thus removed through the pelvic outlet, which in the non-parturient condition would be entirely too bulky for that orifice without mutilation; and fortunate it is that these favorable conditions exist at that time. The dangers to the mother from septic causes through the large raw tumor-cavity did not seem as great as we might expect, since in the case he had reported there was only a temporary rise in temperature. He said, in conclusion, that "it is to be hoped that in future, when a fibroid, no matter how large, is found obstructing delivery, the attempt will always be made to enucleate it, either whole or in part, through the vagina, before endeavoring to drag the child past the tumor with the forceps, or performing craniotomy or version, or, worse than all, sacrificing the mother and possibly the child by Cæsarean section."

In the discussion on this interesting paper, in which Drs. JENKS, WILSON, BYFORD, DUNLAP, VAN DE WARKER, and REAMY engaged, the rarity of this complication of labor was dwelt upon, and a general approval of Dr. Mundé's course was expressed.

Dr. T. GAILLARD THOMAS exhibited a form of apparatus which possessed historical interest. It was a jointed steel girdle, covered with velvet and fastened with a lock. The special feature of the apparatus consisted of a steel perineal band, having apertures opposite the vulvar and anal orifices when in position; these apertures being surrounded by sawteeth. This apparatus (similar to that exhibited at the Hôtel de Cluny at Paris) was found in several pieces in an old trunk received among a lot of effects from an old French estate by a resident of Long Island, who had presented it to Dr. Thomas, who had had it restored and prepared for exhibition to this Society.

Dr. THOMAS then proceeded to read his paper on

A FURTHER REPORT UPON EXTRA-UTERINE PREGNANCY, EMBODYING SIX CASES.

Since reporting twenty-one cases to this Society in 1882, he had seen six more, which he wished to add to the statistics. Most of these cases had been seen in consultation, which would account for the large number in his individual experience. On account of the liability to rupture of the sac towards the fourth month, he advocated early diagnosis and early treatment.

The experiments of Leopold upon artificially-produced extra-uterine fœtation in rabbits and its results he considered as of great interest in this connection. Leopold concluded that rupture of the sac is a common result in extra-uterine pregnancy, and that the dead embryo is usually encapsulated and remains as a foreign body. The inference that recovery in the human race, after similar rupture, may take place, was one that Dr. Thomas fully endorsed. In case of active hemorrhage, the operation of opening the abdomen and the application of ligatures to the bleeding points was advocated twenty years ago by Dr. Stephen Rogers, of New York; but he had no actual experience in such an emergency. Lawson Tait had reported, in the *British Medical Journal*, five cases operated upon in January, 1883, four of which recovered, one died. His own experience had proved that this treatment was entirely justifiable. Dr. Charles K. Briddon, of New York, following Tait, had operated in October, 1883. The history of this case is included in the series of this paper.

Case I.—Mrs. F., 27 years old. Four weeks after cessation of menstruation she received a shock in stepping from a street-car; she had an attack of pelvic peritonitis, and was sick for several months, during which time the abdominal tumor steadily enlarged. Her progress was steadily towards death. An examination failed to establish an accurate diagnosis. Aspiration was performed, and about four ounces of straw-colored fluid were obtained. Subsequently her sufferings became agonizing, and, except when relieved by morphia, she had constant vomiting. Death occurred twelve hours later. At the post-mortem the uterus was found enlarged and pushed forward. There was general peritonitis. A fœtus of four months was found in Douglas's cul-de-sac. Had an accurate diagnosis been possible, laparotomy would still have been fatal. This was the third case in which he had performed aspiration in the early months of pregnancy, and all three proved fatal.

Case II.—Mrs. G., 32 years of age, had had three children. Menses had stopped for nineteen days. The patient was in an unfavorable condition for operation, and, as there were some doubts as to the diagnosis, a week later it was decided to try electricity. The battery was used for five successive days, one pole in the rectum, the other upon the abdomen, using a strong faradic current. The tumor became smaller, harder, and finally disappeared. This was a case of most desperate character, and he had no doubt that had any other course been pursued she would have died.

Case III.—Mrs. H. had had three miscarriages, she also had a suspected extra-uterine pregnancy, and was treated by the faradic current from a Kidder battery, and, this not proving sufficient, the continuous current was used from twenty cells for several days. She

also made a good recovery. Had he not been successful in destroying the fœtus, he would have performed laparotomy.

Case IV.—An Irish lady, four months pregnant; examination showed an ectopic gestation, the tumor tying behind the uterus. The same treatment was instituted. The patient entirely recovered.

Case V.—Mrs. F., 28 years of age, mother of five children. This was the case of rupture of the Fallopian tube in which Dr. Bridon performed laparotomy. The patient rallied, but died soon after operation.

Case VI.—Mrs. X., 23 years of age, married six years; mother of one child four years old. In this case pregnancy had advanced to the ninth month. She sent for her doctor (Dr. Jewett) with all the symptoms of labor. The os did not dilate as the result of the pains, and an examination showed that the uterus was empty. Dr. Thorne was called to see the case, and diagnosticated ectopic pregnancy, but saw no reason for operating, as the child was dead, and he had had so much trouble with the placenta in his other case. The rule should be not to operate because the fœtus is in the abdomen, but because the fœtus is giving trouble. He preferred not to operate at full term, but to wait until the placenta shrivels, unless the child is known to be alive. This patient was afterwards taken to the Woman's Hospital, and Cæsarean section performed. The placenta was the largest he had ever seen, and weighed four pounds. The fœtus weighed sixteen pounds. The sac was attached to the ascending, transverse, and descending colon. Fearing to leave it to cause septicæmia, he made a continuous cobbler's stitch about an inch from the intestine, and removed the remainder of the placenta: he then brought the remnants of the sac down to the lower angle of the wound, and fastened it there, "marsupializing the woman," as Dr. Pallen says. The antiseptic procedure, except the spray, was adopted. She subsequently entirely recovered.

In three other cases he had adopted this expedient of fastening the placenta in the wound and allowing it to slough away. After the fourth month he advises waiting for indications for operating; before that period, although the great triumphs of abdominal surgery might lead us to suppose that laparotomy is the preferable method, he advised the trial of electricity, an infanticide agent of great value, which in the early months of extra-uterine gestation should always be preferred to the dangerous expedient of laparotomy.

Dr. R. B. Maury, of Memphis, read the notes of

A CASE OF TUBAL PREGNANCY WITH RUPTURE OF THE SAC.

The patient had been delivered of a child three years before, when there was no evidence of abdominal or ovarian disease. Her menses were profuse and irregular; she had pains in the hypogastrium at intervals, and when he was called in she had an apparent attack of collapse, with symptoms of intra-peritoneal hæmatocele. She received usual treatment for shock, but without bringing on reaction; the patient was thought to be dying. Upon examination later in the day, the uterus was found enlarged, and just above the pubes, and behind it a small tumor could be felt through the abdominal wall, rising half-way to the umbilicus: it could not be reached by the finger in the vagina. The diagnosis was tubal pregnancy. Afterwards symptoms of peritonitis appeared; on the sixth day she had a chill, temperature 103°, pulse 150; on the seventh, temperature was again 103°; but on the next day it fell to normal, and did not rise again. Subsequently the tumor became progressively smaller. Six months afterwards she had a uterus as movable as in health, and behind it a small hard tumor. Hemorrhage had entirely ceased. There had been no deciduous membrane. With regard to etiology, he only submitted one observation, —that the husband had a stricture of the urethra, and had had urethritis several times in the preceding two years.

With reference to the question of laparotomy in this case, recognizing the rupture, the question of operation was discussed, and it was decided not to operate until she got over the shock. After waiting for several days, he had written to Dr. Thomas, who advised him to wait for symptoms, and, if pelvic peritonitis appeared, to operate. The result showed the wisdom of this course. It would seem to be the better course for surgeons in such cases to postpone operation until the shock of the rupture has passed away.

In the rather desultory discussion which followed, Drs. Mundé, Harvey, Palmer, Wilson, Howard, and Baker reported other cases, and expressed views substantially in accord with those of the lecturer.

Dr. Paul F. Mundé, of New York, read a paper entitled

THE PROPER LIMITATION OF THE OPERATION OF COMPLETE VAGINAL HYSTERECTOMY FOR MALIGNANT DISEASE.

A strong and apparently convincing paper upon this subject was read at the last meeting of the Society, which declared that, both as regards the immediate fatality of the operation itself and the speedy recurrence of the disease, the operation was unjustifiable. In this verdict the Society apparently concurred, with the exception of two members. To the author this absolute condemnation of the total removal of the cancerous uterus seemed hasty, premature, and based upon insufficient clinical experience. Had the condemnation been restricted to the method of Freund of removal by abdominal

section, he would have heartily endorsed it, as it had developed a mortality of sixty-six per cent., and in the few cases of recovery the speedy recurrence of the disease took place almost without exception. This operation has been abandoned by Freund, or at least restricted to exceptionally favorable cases of undoubted limitation of the disease to the body of the uterus, with unusually thin walls and lax ligaments. This operation he had not personally performed, but had seen several cases in the hands of several eminent operators, who, after persistent efforts, either failed to remove the uterus, or in doing so completely exhausted the patient, the result in either case being speedy death from shock or hemorrhage. But the Society apparently condemned all operations for the removal of the cancerous uterus, apparently overlooking the excellent results of the removal of the organ through the vagina. It is due to the many experienced surgeons and conscientious operators who hold a different opinion, and to the interest of progressive surgery, to enter a respectful protest against the wholesale condemnation, at least so far as this vaginal operation is concerned.

As early as 1876 (two years before Czerny, of Heidelberg, revived the old, long-forgotten operation of Sauter, of Constance, who was the first to devise this method and carry it out successfully), the author's attention had been directed to the operation, and before the New York Obstetrical Society (October 17, 1876) he had made this suggestion, during the discussion of a fatal case of the abdominal operation for hysterectomy. While at Wurzburg in 1868, he had seen a reprint of an old graduation-thesis presented to the University of Göttingen, written in 1827 by Von Siebold, on the "Extirpation of the Cancerous Uterus." After reviewing the various methods of Sauter, the elder Langenbeck, and others, he said that his personal investigations on the cadaver had demonstrated the impossibility of detaching the peritoneum from the non-puerperal uterus above the level of the internal os. A perusal of Schroeder's operation of wedge-shaped excision up to the internal os and of vaginal extirpation, together with Dr. Jackson's paper, decided him to seize the next favorable opportunity to perform the latter operation.

Case I.—E. M., 43 years, ten children, two abortions, came, in October, 1883, to his service at the New York Polyclinic for menorrhagia existing six months. Last child born nine years before. Cancer of cervix was found, extending upwards, but limits could not be ascertained. Uterus was freely movable, vagina capacious, parametrium apparently free of disease. No enlarged glands or induration of any kind in the pelvic cellular tissue. Vagina healthy, general health still fair. On October 10 the operation was performed. Sims's position; uterus drawn down with double volsella forceps; with a knife he first made a semicircular incision through the anterior fornix vaginæ, pushed up the bladder with the fingers, then completed the circuit of cervix by posterior incision, detaching the vagina very easily with the fingers, except at the side where the vessels enter and leave and the folds of the broad ligaments join each other. Two fingers of the left hand were entered in Douglas's pouch, to the right border of the uterus, and the peritoneum was then pushed out and severed with closed scissor-points; the peritoneum was then readily torn, so as to leave the uterus free except the attachment of the broad ligaments. Seizing the fundus with a tenaculum through the posterior opening, with extra-abdominal pressure the uterus was retroverted, and after considerable difficulty, owing to the large size of the uterus, it was drawn through the posterior incision. Each broad ligament was now tied in three sections with No. 2, braided, carbolized silk, and divided with scissors. The application of the ligatures was quite difficult, but no blood was lost from the ligaments, and not more than a few ounces in all. The ovaries were readily removed with the tubes. The patient's condition was good. The wound in vaginal vault was closed with silk sutures, the peritoneum not being occluded. A rubber drainage-tube was introduced, and the vagina packed with iodoform gauze. There was no shock. On third day the tampon was removed and vagina irrigated; on seventh day drainage-tube was removed. Patient left bed on twelfth day, and on the thirteenth all but three of the ligatures came away; the stitches were removed on the sixteenth, when the wound was practically closed. Patient recovered from the operation. There was no return of the disease for nine months, when it reappeared in the cicatrix. No further operation is contemplated. The patient's general health is still good.

In Case II. the operation was a difficult one, the disease having extended to the surrounding tissues. The patient did not react from the shock, but perished a few hours later. In a similar case he would not again perform the operation, nor would he consider it advisable.

Admitting the truth of Dr. Jackson's first conclusion concerning the difficulty of early diagnosis of uterine cancer, he claimed, however, that our facilities, both as regards the greater readiness of the female sex to submit to examinations when the significance of certain symptoms is made clear to them, and as regards the early recognition of cancerous degeneration, will doubtless improve with every year. He said that it will be granted that the number of cases in which vaginal hysterectomy for cancer is indicated as justifiable and offers fair chances of recovery will always be small. Out of 812 cases of uterine cancer seen by Schroeder or his assistants,

only in 34 was colpo-hysterectomy performed. Marter reports 52 hysterectomies; Olshausen, 32; and out of over 160 cases of uterine cancer which he had seen, he found only 2 cases which seemed to him to permit the radical operation. So far as the first-named operators are concerned, their indications have been, by their own statement, considerably restricted since they began to operate.

Secondly. Dr. Jackson states that, the diagnosis once established, there is no hope for a radical cure. This is refuted by Carl Braun's statistics for various operations, chiefly the galvano-caustic amputation of cervix. Paulet reports 136 operations of this character, 10 of which proved fatal; and of the 126 patients who recovered, 31, or 25 per cent., remained well after two years. Schroeder reports 129 cases operated on during the last eight years: 28 cases, or $21\frac{8}{10}$ per cent., remained well after two years. He frankly states that in 4 of these cases the disease returned as late as from two and a half to three and a half years, but 24 remained well after this period,—certainly an excellent result in this fatal disease.

The operation compares favorably with that for cancer of other organs. Surely no one will doubt the correctness of the diagnosis in the hands of such an experienced gynæcologist as Carl Braun. A disease in which 144 of the patients remain well after two years cannot be said to be incurable by operative measures.

Tables were then shown in reply to the statement that the operation is a highly dangerous one and affords to those who recover no hope of radical cure, which show that out of 82 operations there were recoveries in 48, and 32 remained well after two years. The comparatively few cases which have been under observation for two years or longer after the operation may appear strange; but it is because the operation is so recent that the few operators have had no opportunity of following up their cases, or, if they had, they have not yet reported them.

The result of 39.5 per cent. compares very favorably with Paulik's cases of removal of cancer of the cervix (only 25.0), or of Schroeder (21.8), after different methods of operating.

The lines of the operation certainly need to be more strictly drawn. The presence of enlarged glands or infiltrations of any kind in the parametrium (vaginal wall or pelvic cellular tissue), the fixation of the uterus, even to the slightest degree of exudation,—these conditions should absolutely contra-indicate hysterectomy. A rectal examination with the finger will prove of great value in determining these points.

He said that in the discussion at the Berlin Obstetrical Society (May 23, 1884), Löhlein, Ruge, Olshausen, Hofmeier, and Marter had spoken in favor of this operation when performed in selected cases.

Thirdly. As regards the danger of the operation itself, it has been exaggerated by Dr. Jackson. Ovariotomy is also dangerous, but it is justifiable. So are nephrectomy and other major operations. A table was here introduced to show the mortality directly following the operation of vaginal hysterectomy for cancer: 235 cases and 52 deaths in Europe; 21 cases and 10 deaths in America; making 256 cases, with 62 deaths, or 24.6 per cent. This disproves Dr. Jackson's statement as to immediate danger of operation.

The two main questions to be decided are really,—

1. Can vaginal hysterectomy for uterine cancer be performed without so great a loss of life as to render it unjustifiable? and,

2. Can we hope to secure by it complete immunity from a return of the disease, or at least so much relief from suffering for several years as to compensate the patient for the risk she incurs of losing her life by the operation?

To each of these he returned an affirmative answer, and then proceeded to consider the details of the operation. In conclusion, he said that, inasmuch as vaginal hysterectomy is an operation based on sound surgical principles, the object of which is to save and prolong life, and not to shorten it, and as the indications for results and justifiability of operation are not a matter of sentiment or theoretical reasoning, but of solid facts and figures, the operation is one which should not be absolutely rejected, but increasing experience will show its usefulness in its limited field. Finally, he reviewed the minutiæ of the operative procedure for vaginal hysterectomy, the success of which would be favored by early operation, before the general health is seriously impaired, and before the disease has extended far into the uterus. Where surrounding tissues or organs are known to be involved, the operation is not justifiable.

DISCUSSION.

This paper gave rise to a spirited discussion, shared by Drs. REAMY, JACKSON, VAN DE WARKER, ENGELMANN, PALMER, BAKER, SCOTT, FENGER, and MUNDÉ. The different speakers varied radically in their recommendations, and differed in opinion upon the utility of any operation whatever in cases of uterine cancer. Hysterectomy was considered an heroic remedy, whose limits of usefulness were certainly very restricted, and whose utility had not yet been satisfactorily demonstrated. Partial operations, like that of Dr. Baker, were thought to be safer, and, in some cases at least, more successful. The operation recommended by Dr. Mundé has not been practised a sufficient period of time to permit a legitimate comparison with other methods (or none at all) as to the relative length of life afterwards.

Dr. EDWARD WARREN SAWYER, of Chicago, read a paper entitled

SOME REMARKS ON THE OCCIPITO-POSTERIOR POSITION IN VERTEX LABORS; WITH AN ANALYSIS OF THIRTY-EIGHT CASES OCCURRING IN THE PRACTICE OF THE AUTHOR.

After referring to the great disparity existing in the recorded statistics as to the comparative frequency of posterior position in vertex labors, he said that he had met with thirty-eight instances in one hundred and eighty-three labors, or in nearly one-fifth of his vertex cases; in three the occiput was to the left, in thirty-five to the right. Twenty-six occurred in primiparæ, twelve in multiparæ, the greater frequency in the former being due, in his opinion, to the slightly greater density of the tissues in front, by which the back of the child is forced into the back part of the uterus, whereas in multiparæ the relaxation of the parts allows the occiput to occupy the position to which it naturally gravitates, with the back to the front; the excess of the right position over the left is undoubtedly due to the presence of the rectum.

The prevailing idea of the mechanism of posterior vertex positions is that it is the same as in anterior positions, the rotation being more extended (Tarnier, Leischman, Lusk); yet this doctrine is somewhat questioned by some. His own observation was that when the occiput engages in a posterior position it persists in this position, and naturally is delivered in this position, very rarely rotating to the front. In thirty cases out of thirty-eight it was delivered in the posterior position; rotation to the front with the forceps was not attempted.

He next considered the question, How long should the attendant wait for rotation without interfering, when the head is near the inferior strait, before putting on the forceps? After referring to a case of Madame Boivin's, where the woman was delivered of a dead child after waiting forty-eight hours, the mother dying afterwards, he said that in his own experience occurred the following case: the wife of a physician, who had been twenty-eight hours in labor, the head refusing to engage on account of posterior position, he performed version and delivered, but she died in a few hours. In another case he delivered with the forceps successfully after twelve hours. In no instance had he regretted early interference with the forceps, but he had several times regretted too much delay. He had been guided by a simple precept,—viz., not to allow a presentation to remain more than two hours at any point in the parturient canal. After the bag of waters has been drained away there is greater danger to the tissues of the canal.

Referring to the difficulty of ascertaining by the touch alone the position of the presenting head, he said that where the labor goes on, and some difficulty is found in the second stage, this cause should be suspected; it is a condition of danger, and demands the interference of the attendant for the mother and the child. The diagnosis can only be made positively by introducing the hand into the vagina, in order to permit the fingers to ascend in front of the child and detect the superciliary ridge. For this examination the mother should have ether administered.

Having recognized the position, two courses are open for the obstetrician: (1) to deliver with the forceps in the same position, or (2) to endeavor to change it to an anterior position. The latter can only be done by introducing the hand into the vagina, so as to grasp the fœtus and turn the shoulders with the head. It is always difficult to turn a slippery head with the fingers alone. If the attempt fail to turn the shoulders with the head, there is danger of twisting the neck.

Where it is decided to deliver with the forceps in the posterior position, he places the woman upon her left side, and has her under the influence of ether. Tarnier's forceps he regards as very dangerous in this class of cases. He uses his own modification of Simpson's forceps, and applies the blades to the sides of the child's head. The handles of the forceps should be brought well forward, so as to keep the head in complete flexion. When left to nature's unaided efforts, the sharp vertex ploughs through the perineum and may perforate it; with the forceps the perineum may be protected, and the head can be brought down in the occipito-frontal diameter, which is one-fourth inch less than the occipito-mental. The rule is to keep the head flexed. For this purpose he prefers his continuous-curve forceps, which he presented to the profession in 1878. While in the multiparæ the perineum was often saved, it was lacerated in all the primiparæ.

The mortality was as follows: four children were still-born; six others died shortly after birth; one died in the uterus from rupture of the umbilical cord; some may have died from injury with forceps.

He concluded by exhibiting his forceps, and explaining their peculiar advantages for the condition under consideration.

In the extended discussion on this paper, in which Drs. RICHARDSON, REAMY, JOHNSON, HOWARD, ENGELMANN, and the PRESIDENT participated, a general disagreement with Dr. Sawyer's opinions as to the mechanism of occipito-posterior positions was shown, and no particular advantage was accorded to the single-curve forceps. Even the diagram copied from Snelling unfortunately came in for adverse criticism on account of deformity and want of conformity with nature.

Dr. GEORGE J. ENGELMANN, of St. Louis, presented two papers, entitled "Periodical Symptoms in Uterine Disease," and "A Rare and Fatal Form of Sepsis without Symptoms."

The former was read by title, the latter *in extenso*.

A RARE AND FATAL FORM OF SEPSIS.

There is a peculiar form of septic poisoning, due to obscure causes, puzzling in its manifestations, apparently of favorable prognosis, but invariably fatal in its termination. The symptoms are not those of septic poisoning: none of these may be present, or one only and the others absent. The temperature is usually not above the normal, so that the physician who depends upon the thermometer may be deceived and misled into giving a favorable prognosis. These are cases in which a sort of medical intuition is required rather than ordinary diagnostic skill. The text-books and usual authorities do not call attention to this class of cases, perhaps for the very reason that it is difficult to describe a symptomless disease.

Fever and pain are the symptoms most usually relied upon in septicæmia, but here they may both be absent, and the danger is greatest where the symptoms are least or are absolutely wanting. There may be no elevation of temperature, no apparent depression of the vital powers, no profuse sweats, no elevation of the pulse, no diarrhœa with intestinal catarrh. There may be chills, or there may be none: in fact, it is the absence of symptoms rather than their presence which characterizes this form of septic poisoning. The pulse may be slightly rapid and feeble, and there may be some painless looseness of the bowels, or bronchial catarrh, but nothing marked. He must, therefore, take exception to the statement of Dr. Barker that the "symptoms will vary with the quantity of the poison absorbed and the site of the disease," and that the thermometer "is the best means of recognizing the cause, as there is always elevation of temperature," as it had not been confirmed by these cases.

This condition is apt to follow the removal of uterine fibroids and ovariotomy; but it may occur in either sex. These views are not based upon Dr. Engelmann's experience alone; he has had others in consultation with him, who could confirm his statements. He had seen such cases where able professors had denied the presence of sepsis, even until the last day of life. He might mistrust his own observation, had it not been that others had seen the cases with him.

His first case was an elderly gentleman, suffering with enlarged prostate, who had been in good health, and was travelling in Germany. As he was in the railway-cars, he could not empty his bladder when he wished, and a few days later found difficulty in passing his water. A catheter had to be used: still he did not get better. He was in able hands, under the charge of gentlemen connected with Langenbeck's clinic, and careful examinations were made, but no symptoms of disease of any kind were detected. The catheter was passed easily; the urine was clear, but the patient was evidently failing. At the end of six weeks he passed away, comatose, without any symptoms. A post-mortem examination revealed a collection of pus surrounding the kidney, which appeared to be secondary to a small abscess in the prostate gland. The ureter passed through a sac of pus for almost its entire extent. It is strange that this did not produce any effect upon the pulse or temperature; but there was a slight diarrhœa shortly before death, though not a septic diarrhœa.

In a second case, a child died from this form of septic poisoning after diphtheria, which was one of several which he had seen which were precisely alike, without any fever. For several weeks septicæmia was progressing in his body without producing symptoms, until he suddenly had convulsions, and died.

Another case was that of a primipara, a young woman 28 years of age. The child was delivered by the breech, and there was some difficulty in removing the placenta; the perineum was torn a little; no operation was performed, but antiseptic injections were used. Although the temperature was $103\frac{1}{5}°$ and pulse 140 the next day, this soon subsided, and the temperature remained about $98\frac{1}{2}°$ to $98\frac{4}{5}°$. She then expressed herself as feeling well and comfortable, but her abdomen was immensely distended. He was called to see her at this time, and considered the case hopeless. The pulse alone was affected,—it was 104 and depressed; the temperature was normal. She continued thus, feeling well, for several days; but on the fourth day she began to sink rapidly, vomited constantly even fæcal matter, and died comatose. After death her peritoneal cavity was found filled with pus.

The next case of septicæmia was one which was not recognized as blood-poisoning by one of our oldest and best physicians, and, after continuing under his care for four to six months unnoticed, went to its end without being discovered. The case was originally one of fibroids of the uterus in a virgin 56 years of age. There had been hemorrhage and other symptoms of fibroids; she had a discharge of a dark color, foul-smelling, containing shreds of tissue. Her pulse was 80 to the minute, temperature 99°. Coming under his care, he now used antiseptic injections into the uterine cavity, and afterwards powdered the cervix with iodoform; he gave quinine in large doses until her condition gradually changed. He told her physician that she should not be treated locally only, as she was suffering from septicæmia. The discharge afterwards became less, the pulse improved, and she was much better, apparently, from cleansing the uterine cavity. He stopped treatment, and the next day she had a chill, followed by abdominal pain and fever (104°); pulse, 120; but the temperature of the next few days was 98°, $97\frac{3}{10}°$, $97\frac{6}{10}°$, and just before death it was 95° in the rectum. In this case a physician assured the family that there was

no septic poisoning in the case, because of the low temperature.

In another case the patient suffered with pelvic peritonitis. The temperature was only half a degree above the normal, the pulse was either a little accelerated or remained at the normal. There was no pain and no sensitiveness in the abdomen; the patient felt well, but, contrary to expectation, she gradually sank away.

He believed that, as these cases are not infrequent and are usually fatal, they should be recognized. As they are also extremely interesting, he had deemed them worthy of discussion at this meeting.

DISCUSSION.

Dr. RICHARDSON said that he had seen five or six such cases, and would confirm what had been said as to their history and prognosis. The very hopefulness of the patient would lead him to suspect the presence of this form of septicæmia.

Dr. REAMY endorsed the description as far as the slow or not accelerated pulse and low temperature; he had also noticed a sort of mental excitement,—the patient feels very well, and calls especial attention to the fact. He mentioned particularly a class of cases with distended abdomen without elevation of temperature, and also cases of peritonitis without fever, which are closely allied to those mentioned, and likewise prove fatal.

Dr. J. TABER JOHNSON reported a case of a woman on the ninth day after delivery, without ordinary septic symptoms, but she said that she was going to die, although she felt well. There was no elevation of pulse or temperature, but she did die. He thought that the death after diphtheria might be due to some other cause than septic poisoning.

Dr. ENGELMANN closed the discussion, reiterating the principal features of the cases.

The following papers were read by title by the Secretary:

"The Hygiene of Pregnancy," by Dr. Samuel C. Busey, of Washington.

"Rapid Dilatation of the Cervical Canal," by Dr. William Goodell, of Philadelphia.

"The Physiognomy of the Vulva as a Sequence of Anal Disease, and the Cause or Sustaining Cause of Uterine Disease," by Dr. Isaac E. Taylor, of New York.

"The Early History of the Treatment of Vesico-Vaginal Fistule in the United States, and the Statistics of the Several Modes of Operating," by Dr. Nathan Bozeman, of New York.

"Periodical Symptoms in Uterine Disease," by Dr. George J. Engelmann, of St. Louis.

"Contributions to the Topographical and Sectional Anatomy of the Female Pelvis," by Dr. David Berry Hart, of Edinburgh; presented by Dr. Alexander J. C. Skene, of Brooklyn.

"Fibro-Myomata and Fibro-Cystic Myomata of the Uterus: their Diagnosis, Prognosis, Pathology, and Treatment; with Cases and Specimens," by Dr. R. Stansbury Sutton, of Pittsburg.

"On the Ring of Bandl," by Dr. William T. Lusk, of New York.

BUSINESS MEETING.

The annual meeting for private business was held on Wednesday evening, when the reports of the Treasurer and Auditing Committee were read and adopted. The proposed amendments to the constitution and by-laws, which had lain over from last year, increasing the limit of membership to one hundred, were adopted. An amendment proposed by Dr. Emmet last year, making a slight change in the method of election, and requiring that all names of candidates for Fellowship should be brought before the Society by the Council before final action upon them, was also adopted.

Dr. BABCOCK, of London, England, was elected to honorary membership. No active members were elected.

The following officers were elected for the ensuing year:

President.—William T. Howard, M.D., of Baltimore, Maryland.

Vice-Presidents.—W. L. Richardson, M.D., of Boston, Massachusetts; Paul F. Mundé, M.D., of New York.

Secretary.—Frank P. Foster, M.D., of New York.

Treasurer.—Matthew D. Mann, M.D., of Buffalo, New York.

Other members of Council.—Drs. A. Reeves Jackson, H. P. C. Wilson, J. Taber Johnson, and Ely Van de Warker.

The city of Washington, D.C., was selected as the next place of meeting, in September, 1885,—the time of meeting to be the third Tuesday and the two following days.

BANQUET.

The Society was the guest of the Chicago Gynæcological Society at a grand banquet given at the Palmer House on Tuesday evening, at which Dr. A. Reeves Jackson presided. A large number were present, including many prominent members of the local profession.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, September 25, 1884.

The President, JAMES TYSON, M.D., in the chair.

DR. GUY HINSDALE exhibited a model of *phantom brain.*

The model is constructed in colossal proportions, and is intended to show the course of the fibres in the human brain, and their

relation to the several nuclei and to the spinal cord. The preparation has been recently purchased for the Mütter Museum of the College of Physicians, and was constructed by Buechi, of Berne, Switzerland, under the supervision of Prof. Acby.

Its height is one hundred and twenty-five centimetres; its width, seventy centimetres. The cortex is dotted over with numerous corks, two centimetres long, which are distributed in systematic order. The basal nuclei, of a much larger size, are seen in their appropriate places. The spinal cord, made up of ganglia and columns of wires of different colors, is represented throughout a portion of the cervical region. These columns of the cord, of different colors to distinguish their function, lead to their appropriate ganglia of corresponding color, or to the areas in the cortex which are marked by similarly-colored corks.

Taking first the anterior and lateral columns of the cord painted red, we can trace these motor fibres to the anterior and lower portion of the medulla, where they decussate, through the pons, to the internal capsule, where, between the caudate nucleus of the corpus striatum and the optic thalamus, they radiate to the cortex. They are seen to come chiefly from the convolutions about the fissure of Rolando. When red balls are seen from that point, a red motor fibre descends to the anterior or lateral columns. It will be seen that the column of Türck, or direct pyramidal tract, is in relation with the posterior part of the lateral column of the opposite side. As regards the exact localization of the sensory and motor tracts of the spinal cord, there is still some discrepancy of opinion. Prof. Ferrier states that the antero-lateral columns are usually regarded as the chief motor paths. but quotes the more careful experiments of Ludwig and Woroschiloff (1874), who place the motor paths in the lateral columns only. The anterior columns (of Türck) are regarded more as commissural connections between the motor nerves and adjacent segments, and at least not the direct paths of motor impulses proceeding from the brain.

Tracing the fibres of the posterior columns, colored blue, we find them represented as wholly decussating in the medulla, forming the posterior third of the internal capsule, thence passing to the corpora quadrigemina and optic thalami, colored blue, which are the great centres of sensation.

The external portion of the lateral columns, colored green, are seen to lead to the cerebellum, decussating near its superior surface. The yellow fibres of the model place the basal nuclei in communication with the cortex; the white fibres, constituting the corpus callosum, are purely commissural. The columns of the cord, as represented in the model, correspond precisely with the arrangement given by Flechsig, and endorsed by Charcot and Hammond. Ludwig and Woroschiloff* argue that "a vicarious interchange of function potentially exists between different parts of the cord." Ferrier admits that, in determining the course of the cerebral fibres, anatomy reveals very little, and that physiological experiment is practically the only means at our command. Many more observations and experiments will have to be made before it can be said that the sensory and motor paths have been exactly defined, and all views reconciled.

A case of infantile mollities ossium. Presented by Dr. CHARLES MEIGS WILSON for Mr. CLINTON DENT, of St. George's Hospital, London.

This specimen was sent to me by Mr. Dent, the well-known editor of the English edition of Billroth's "Notes on Clinical Surgery." The following history was also furnished by Mr. Dent: "This specimen shows the inner vertical half of the right femur of a child æt. 16 months. There is a pseudo-fracture of the bone. The medullary canal is filled up, and a considerable deposit of enveloping callus maintains the fragments in apposition. The entire bone is unnaturally soft, and in the recent state showed this peculiarity still more strongly. The bone was removed post mortem from the body of a feeble, ill-nourished child. No history of syphilis was obtainable from the parents, and the child showed no evidence of congenital syphilis. Some of the ordinary symptoms of rickets were observable,—*e.g.*, bending of the ribs, general tenderness, enlargement of the wrists, etc. No symptoms of scurvy were present. It was evident that there was much more than rickets in the condition. When the child was first admitted to the hospital, there were pseudo-fractures of the right humerus and left tibia, besides the fracture of the right femur. The humerus, which was bent at a right angle, was forcibly straightened. It bent like a bar of soft metal, and remained in the new position; it was, however, put in a light pasteboard splint. Subsequently, with the removal of the splint, the bone again gradually bent, and was again forcibly straightened. While in the hospital under observation, the femora became affected in the usual place,—*i.e.*, a little below the trochanters. Some swelling and tenderness were noticed; and then, although the child was kept constantly in bed, the bones became bent. Ultimately, in about ten days, the pseudo-fractures became complete. Great improvement of general health, as evidenced by rapid increase of weight, resulted from treatment by rest, good diet, and cod-liver oil. The child finally died with an attack of whooping-cough, after having been under observation a few weeks."

This is a very rare form of bone-disease,

* Ferrier, Functions of the Brain, p. 5. London, 1876.

especially in the young. It is seen occasionally in England, never with us. The pathological changes seem to be of a retrograde character: sometimes lipomatosis takes place; sometimes there is a metamorphosis, first into cartilage, and then into embryonic tissue. This specimen shows, in different portions, both changes. The disease is attended with marked fatality. In this specimen the cortical substance is attenuated, and the medullary cavity is enormously enlarged. The bone seems deficient in lime-salts. Some authorities believe that to the lactic acid found in the chemical analysis of such bones this change is to be attributed; but this fact is mentioned only in order to elicit discussion. Other observers have found enormous quantities of oxalate of lime in the urine of patients with malacosteon. One curious fact is the effort which nature makes to repair the fractures, as shown in this specimen. This callus seems deficient in inorganic matter, and is destined eventually to be reabsorbed. Syphilis, scrofula, and scorbutus have all been assigned as causes of the affection. Most authorities, denying the existence of the disease in children, assign it to middle life, and speak of it as being lighted up or aggravated in women by pregnancy.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held September 24, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

MALIGNANT DISEASE OF THE LUNG AND MEDIASTINUM.

Dr. VAN GIESEN presented the specimen, for which he was indebted to Dr. French. The patient was aged 41 years, a German. She was admitted to the hospital September 11, 1884. Over the upper portion of the right lung there was entire absence of the respiratory murmur, of vocal fremitus, and of dulness on percussion. The patient was much emaciated. There was œdema of the left upper eyelid. There was no œdema of the extremities. There were tympanites and dyspnœa, cough without expectoration, nausea without vomiting. The physical signs over the left side of the chest were normal. There was no history of cancer in the family. Death ensued on the 16th of September. The brain was not examined. The heart was normal. The pericardial sac contained eight ounces of clear serum. In the anterior mediastinum was a mass of hard, cancerous glands, of the size of the fist. The upper part of the right lung was infiltrated with hard, cancerous tissue. The remainder of the lung, with the exception of some adhesions at the base, was healthy. The left lung was normal. The bronchial glands were enlarged. The right bronchus was constricted to the size of a No. 8 English catheter.

The spleen was normal, as were also the kidneys. The liver was slightly fatty. Unfortunately, the uterus was not examined. An imperfect microscopical examination pointed to sarcoma of the mediastinum and lung.

This was the fourth or fifth case seen by Dr. Van Giesen within the past three years, and he had found an important feature in the diagnosis to be absence of vocal fremitus. Usually in cases of condensation of the lung we expected to find vocal fremitus more or less exaggerated. In the present instance we could readily account for its absence by the closure, nearly complete, of the right bronchus.

With regard to œdema of the eyelid, this was present also in one of the other cases, due, as Dr. Van Giesen believed, to pressure upon the vessels of the corresponding side by the enlarged glands.

PHAGEDENIC SYPHILIDES.

Dr. WYETH presented a hospital patient, aged 35 years, a native of Germany, who was admitted on the 11th of July. The patient had had gonorrhœa on several occasions, the last attack being eight months before his admission, but he gave no history of syphilis until five and a half weeks prior to July 11, when he had connection with a prostitute, and one week later noticed what looked like a blister, a quarter of an inch in diameter, at the base of the penis. He had not been with a woman previous to this time for some weeks. The sore remained stationary about ten days, and then began to enlarge and become painful. Before admission the sore on the penis and groin was treated with iodoform and charcoal poultices. It had attained to considerable size, and was deeply excavated. On admission there was a slight pustular and papillary eruption over the face and extremities. The glands were enlarged. There was a sore on the tongue, and some elevation of the temperature. When Dr. Wyeth first saw the patient, August 7, the eruption was well established, and at places, especially on the nose, presented the appearance of lupus, but it was evident from the history that it was a phagedenic syphilide, which had come on in the early stage of the constitutional affection. Dr. Wyeth thought this case illustrated the statement of Bumstead and Taylor, that a pustular syphilitic eruption was apt to follow the phagedenic syphilitic ulcer, and the violence of the disease was in many cases proportionate to the violence of the initial lesion. Up to the time that he saw the patient, blue mass had been administered in small doses, but without apparent effect. He then gave him increasing doses of the proto-iodide of mercury until the effects had become manifest. He thought the strongest proof of the specific origin of the eruption was its response to the anti-syphilitic remedy.

Referring incidentally to the treatment, Dr. Wyeth said he regarded mercury as the remedy for syphilis, just as quinine was the remedy for malaria. Nevertheless, there were many cases of a mild nature, and the patients may get well without any medicine whatever. Indeed, one might well prefer syphilis to pneumonia or typhoid fever.

Dr. LEVY spoke of the importance of administering tonics when indicated, and the PRESIDENT said that he had often found a tonic course of treatment all that was necessary.

REVIEWS AND BOOK NOTICES.

MALARIA AND MALARIAL DISEASES. By GEORGE M. STERNBERG, M.D., F.R.M.S., Major and Surgeon United States Army, Member of the Biological Society of Washington, late Member of the Havana Yellow Fever Commission of the National Board of Health, Corresponding Member of the Epidemiological Society of London, etc. 8vo, pp. 329. New York, William Wood & Co., 1884.

Dr. Sternberg's eagerly-looked-for book is an extremely important and valuable number of the Messrs. Wood & Co.'s current annual series. The author has brought to the difficult task of its preparation lively interest in the subject, long familiarity with the obscure problems relating to malaria and its alleged causes, practical knowledge of malarial diseases, and, to regulate all, the scientific spirit. The result is an able presentation and review of the facts as they at present stand. To those positive persons who must have a theory for all things, this book will prove a disappointment. The author has fully recognized that the unsolved problems connected with the subject are not to be settled with the pen,—a fact that he is in the very best position to know. He has, therefore, presented his case as it stands, realizing that further evidence must be submitted ere a verdict can be reached.

But to those who desire the known facts concerning the periodical diseases gleaned from the experience of the best observers in all regions of the world where they prevail, with a full exposition of current theories and an uncompromising criticism of the same, this book will be welcome and useful. It should be read by every practitioner of medicine, we were about to say, from St. Johns to Santa Barbara,—the ancient phrase is better, from Dan to Beersheba,—for malaria is widely prevalent. J. C. W.

THE REFRACTION OF THE EYE. By GUSTAVUS HARTRIDGE, F.R.C.S. J. & A. Churchill, London, 1884.

This little work supplies a want, and need only to be examined by those beginning the study of refraction to be appreciated. The first chapter is devoted to some general principles of optics; the second, to the refraction of the eye, accommodation, and convergence; the third, to the diagnosis of refraction errors; and succeeding chapters to hypermetropia, myopia, presbyopia, astigmatism, etc. Quite a full description of retinoscopy is given, and also some account of the ophthalmometer of Taval and Schiötz. A series of test-types is appended. The book is well printed, and the illustrations are numerous and excellent. Two criticisms only suggest themselves to us:

1. That the large and important works on Anomalies of Refraction by Mauthner and by Nagel (Graefe u. Saemisch, Handbuch der Augenheilkunde) seem not to have been consulted in the preparation of the book.

2. The error common to many medical books of not defining with exactness the facts and observations which are presented. Thus, in speaking of the shortening of the axis in hypermetropia, our author says, "So constant and regular is this decrease that from the amount of hypermetropia can be estimated the diminution in length of the axial line." Upon this principle a table is constructed showing the amounts of shortening which occur in different degrees of hypermetropia. Now, this is erroneous. The error results from not defining with exactness the statement that hypermetropia is due to shortening of the axis of the eye. One cannot, by taking the length of the diagrammatic eye and calculating the shortening which would occur in a given grade of hypermetropia, say that that amount of shortening exists in an actual case of hypermetropia. We commend, however, this book as one which will add to the reputation of the author. H.

HAND-BOOK OF THE DIAGNOSIS AND TREATMENT OF SKIN DISEASES. By ARTHUR VAN HARLINGEN, M.D., Professor of Diseases of the Skin in the Philadelphia Polyclinic and College for Graduates in Medicine, etc. With Two Colored Plates. Philadelphia, P. Blakiston, Son & Co., 1884. 8vo, pp. 282.

This new hand-book is essentially a small encyclopædia of pathology and treatment of skin diseases, in which the subjects are arranged alphabetically. This arrangement was that followed by the late Tilbury Fox, of London, in his hand-book, which, we believe, was remarkably successful; and we have no doubt that it will be equally appreciated in the present work, which (compendious in form) contains a very complete summary of the present state of dermatology. Dr. Van Harlingen's position in the profession, being at present Vice-President of the American Dermatological Association, which he served as Secretary for several years, and the high standard of his communications to his department, are sufficient to warrant the confidence

in his teachings which is fully sustained by an examination of this hand-book, which we heartily commend for its brevity, clearness, and evidently careful preparation.

THE PEDIGREE OF DISEASE: BEING SIX LECTURES ON TEMPERAMENT, IDIOSYNCRASY, AND DIATHESIS, DELIVERED IN THE THEATRE OF THE ROYAL COLLEGE OF SURGEONS IN THE SESSION OF 1881. By JONATHAN HUTCHINSON, F.R.S., late Professor of Surgery and Pathology in the College; Emeritus Professor of Surgery in the London Hospital; President of the Ophthalmological Society, etc., etc. 8vo, pp. 136, London, J. & A. Churchill, 1884.

These lectures, delivered in June, 1881, now reprinted in book form, are thus happily rescued from the oblivion of their first appearance in one of the medical journals. Why the author should have so long delayed their publication in the present form is not apparent. His admission that the commendation bestowed upon them by Sir James Paget last year induced him to publish them now shows how near they came to not being republished at all. That would have been a serious loss to medical literature, notwithstanding its oppressive abundance. This kind of work is far from abundant: would it were more so! When we think of the author's work, the Virgilian "Felix qui potuit rerum cognoscere causas" comes to mind; and these lectures are in his best vein. Dealing with a group of cognate subjects that are little thought of and still less understood, yet of eminent practical importance; written in a style at once lucid and attractive; clear, learned, and reasonable, these lectures will be read with equal interest and profit by those clinicians who seek to temper their knowledge of things with knowledge of the causes of things.

J. C. W.

DISEASES OF THE HEART AND THORACIC AORTA. By BYROM BRAMWELL, M.D., F.R.C.P.E., etc., etc. With 317 Illustrations. 8vo, pp. 783. Edinburgh, Young J. Pentland, 1884.

It affords us pleasure to commend in the strongest terms this excellent treatise. In doing this, we are prepared to reply, to any challenge that may be made as to our reasons,—first, that Dr. Bramwell's work is literally *excellent* among recent books upon the heart in convenience of arrangement and in comprehensiveness; second, that it is singularly full and clear in the sections on pathology; and, third, that the subject of treatment is handled with judgment and brought up to date.

The full-page lithographs are of great general value, and will be especially useful to those students and practitioners whose opportunities in the dead-houses of hospitals or in museums are few and far between. J. C. W.

GLEANINGS FROM EXCHANGES.

"THE LANCET" ON MODERATE DRINKING AND TEETOTALISM.—At the recent Health Exhibition in London the subject of intemperance was discussed, and the use of alcoholic liquors condemned in no measured terms. The *Times* thereupon published a leading article defending moderate drinking, and stated that teetotalers are persons of inferior physical development, and, so far as they can be judged by facial expression, not "remarkable for intellectual power," the best work of the world being done by the moderate drinkers. On the whole, it was concluded that teetotal societies do very little good and a great deal of harm. The *Lancet*, in commenting upon this, without attempting to defend the dogmatism of temperance reformers, says, "We cannot much approve of the article in our contemporary, but it is rather of its tone and spirit than of its substance that we have to complain; rather with its scant and reluctant praise—its actual dispraise—of men with a great cause and with good motives, than with its scientific propositions, that we have to quarrel. The world is not so much in danger of neglecting to take a proper amount of alcohol that it needs three or four columns of ingenious argument to prevent it falling a prey to indigestion and nervous exhaustion from drinking water alone. But the excuse for such writing would be less if there were a little more reasonableness and temperance on the part of those who seek to abate the national consumption of alcohol. Their case is by no means so contemptible, logically and medically, as the writer referred to above would make out. There are some very good looking fellows among them; they are not by any means intellectually contemptible; they live quite as long as, if not longer than, other people, and escape many diseases that affect others, though they have their own liabilities. They are good workers. There may not have been yet a teetotal Shakspeare or Milton,—there has not been time; but much of the best work of the world nowadays is done by men who either do not use alcohol, or use it in such quantities as to be inoperative physiologically or pathologically. And the common work of the world is done well by abstainers: they are industrious, reliable, healthy. According to Lord Wolseley, they make good soldiers. Sir William Gull has said that 'it is one of the commonest things in our society for people to be injured by drink without being drunkards. It goes on so quietly that it is very difficult to observe. To the professional eye the effect is perfectly marked and distinct.' Many other eminent men have given similar testimony. So that there is an amount of drinking deemed moderate by society which, in the opinion of judges, is very injurious to the liver, the lungs, the nervous

centres, etc. Further, the actual impression made by the teetotal school on public opinion and social habits is considerable, so that sensible men do not take stimulants in the quantities they used to do, or on an empty stomach and without food. No doubt much of this is due to sounder medical science, and to the extreme moderation of medical prescription and example. But part of it is due to teetotalism and to religious efforts to promote sobriety, which it should be the desire of every one to second, the more so as there is still a frightful amount of ignorance abroad as to the impunity with which alcohol, even in strong forms, may be taken into an empty stomach. A physiologist may still be shocked every day in a restaurant or a railway refreshment-room —of course physiologists never go into public houses—by seeing young men order and toss off without thought and without food glasses of spirit more or less raw. He knows how infallibly and how quickly that leads to mischief. But for evils and follies like this there is room for common protest and effort, apart from intemperate doctrines of teetotalism on the one hand, and too easy disparagement of those who hold them on the other."

Abortions, and Elixirs containing Strychnine.—Dr. George Pringle, in a communication to the Canada *Lancet*, points out a new danger from the use of the favorite elixirs containing strychnine. In three cases out of four, in which pregnancy was not suspected, the use of strychnine with a chalybeate brought on an abortion, and the fourth had symptoms of abortion which passed away on stopping the treatment, and again returned upon resuming it, so that the remedy had to be abandoned, and a tonic without the strychnine substituted. He advises that strychnine should not be given after conception has taken place, and that manufacturers should omit both strychnine and arsenic from elixirs sold to supply popular demand.

MISCELLANY.

The Criminality of Cannibalism.—The criminality of cannibalism committed by starving men is soon to be tested in an English court, under peculiar and interesting circumstances. The English yacht "Mignonette" was cast away in the South Atlantic Ocean, and the crew, consisting of the captain, two men, and a boy, were obliged to take to the boat. They drifted about in the open sea for a number of days until all their food was exhausted. They were fortunate enough then to kill a turtle, and thus sustained life for a time. When this was gone, they talked of drawing lots to see who should die for the others. This not being agreed to, and the boy becoming very weak and apparently about to die, the captain decided to kill him in order to save the lives of the others.

After calling upon God to pardon the act, he killed the youth, and the three survivors were kept alive by eating his flesh until a passing vessel picked them up. The facts were not concealed, and the act was not seemingly considered criminal, but on arrival in port the captain was arrested, and his trial is soon to take place for murder. The trial will bring out the fact that unless the captain had done as he did, the lives of all would probably have been lost; but the moral effect of the deed may not be affected by this circumstance. It will also be shown that the four had been tossed about for fifteen days in an open boat, without food, before consenting to the killing; and it will be a matter for consideration whether a person is responsible for his acts under such circumstances.

Ownership of Medical Specimens.—A case involving the right to a medical specimen has just been before a court in Petersburg, Virginia. A person suffering from some internal complaint, which kept him remarkably thin, although enjoying a ravenous appetite, solved the problem of his ailment by ejecting a dead lizard some ten inches long. The curious object was thrown away, but was found and preserved in alcohol by a physician. This was ascertained by the brother of the reptile-ejector, who was also a physician, and was demanded by him from the finder. The latter consented to give it up if he were repaid the cost of preserving it. This was refused, and suit brought to recover the specimen. On the trial in one of the inferior courts judgment was given requiring the finder to give it up. This verdict has been appealed from, and the matter is undecided.

A Suit against a Dentist.—A San Francisco dentist has brought upon himself a heavy verdict for damages in the following way. He agreed with a patient to fill her teeth for seventeen dollars and a half, but demanded five dollars more upon the completion of the work, and, when she declined to pay that amount, forcibly removed the fillings. Suit was then brought for damages, and the jury has just awarded a verdict for two hundred and seventeen dollars and a half, besides costs of the suit.

Dr. Delafield, of New York, will read a paper on "Broncho-Pneumonia" at the next semi-annual meeting of the Pathological Society, to be held at the College of Physicians and Surgeons, Thirteenth and Locust Streets, October 23, at eight o'clock P.M. The members of the profession generally are cordially invited.

A Death from Ether occurred at the St. Mary's Hospital, in this city, on the 14th instant, a report of which is deferred until the result of the autopsy can also be published.

NOTES AND QUERIES.

TREATMENT OF MIGRAINE.

To the Editor of the Philadelphia Medical Times:

In the *Bulletin Général de Thérapeutique* of August 30, 1884, there is a statement accredited to your journal that bromide of potassium and deodorized tincture of opium in combination may be considered "almost a specific" for the pains of migraine. I wish to add my testimony to the efficacy of this treatment, or one which is virtually the same. Since my earliest recollection I have been a sufferer from this affection, and after trying guarana, caffeine, bromide of potassium alone, and every other agent which could be thought of, and enduring an amount of torture which those only can appreciate who have themselves been sufferers, I have found prompt and invariable relief from a combination of bromide of potassium and morphia, or bromide of potassium and codeia. I can count on relief in half an hour after taking thirty grains of bromide of potassium and one-third of a grain of morphia or three-quarters of a grain of codeia, and so complete is this relief that I have more than once been able to perform delicate operations when an hour before I could not hold up my head, and when my hand had been so tremulous that I could scarcely hold a knife. Within the past fortnight I have tied the common carotid under just such circumstances, and a few months ago I had to do a tracheotomy under like conditions.

No doubt many other physicians have employed this combination with advantage. Indeed, so rational did the treatment seem to me that I should never have thought of mentioning it but for the extract from your journal which has just come to my notice.

Yours respectfully,
Wm. C. Dabney, M.D.

Charlottesville, Virginia,
October 7, 1884.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 28, 1884, TO OCTOBER 11, 1884.

Clements, B. A, Major and Surgeon.—In addition to present duties, to take charge of the office of the Medical Director of the Department during the temporary absence of that officer. Paragraph 1, S. O. 195, Department of Missouri, September 29, 1884.

Happersett, John C. G, Major and Surgeon.—Will be relieved from duty in Department of the East, and ordered for duty at Willet's Point, New York.

Woodruff, Ezra, Captain and Assistant-Surgeon.—Granted leave of absence for four months.
S. O. 235, A. G. O., October 7, 1884.

Bentley, Edwin, Major and Surgeon.—Granted two months' leave of absence, with permission to apply for two months' extension, to take effect upon assignment to duty in Department of Texas of Surgeon F. L. Town. S. O. 121, Headquarters Division of the Missouri, September 30, 1884.

Barthole, John H., Captain and Assistant-Surgeon.—Assigned to duty at Fort Ringgold, Texas, as post surgeon. Paragraph 5, S. O. 129, Headquarters Department of Texas, September 25, 1884.

Cronkhite, Henry M, Captain and Assistant-Surgeon.—Assigned to duty as post surgeon, Fort Reno, Indian Territory. S. O. 197, Department of Missouri, October 2, 1884.

Loring, Leonard Y., Captain and Assistant-Surgeon.—From Department of the East to Department of California.

Harvey, Philip F., Captain and Assistant-Surgeon.—From Department of Dakota to duty in Attending Surgeon's Office, Washington, D.C., relieving

Shufeldt, Robert W., Captain and Assistant-Surgeon,—who, on being relieved, will report to commanding general, Department of Missouri, for duty.
S. O. 237, A. G. O., October 9, 1884.

Crampton, L. W., Captain and Assistant-Surgeon.—Granted leave of absence for one month and ten days. S. O. 60, Headquarters Division of the Atlantic, October 2, 1884.

Powell, J. L., Captain and Assistant-Surgeon.—Granted leave of absence for one month, on surgeon's certificate of disability.

Spencer, William G., Captain and Assistant-Surgeon.—Granted leave of absence for one month
S. O. 204, Headquarters Department of the East, October 8, 1884.

McCreery, George, First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Meade, Dakota Territory. S. O. 115, Headquarters Department of Dakota, October 6, 1884.

Gibson, R. J, First-Lieutenant and Assistant-Surgeon.—Assigned to duty as post surgeon, Fort Winfield Scott, California, relieving Assistant-Surgeon A. S. Polhemus.

Polhemus, A. S., First-Lieutenant and Assistant-Surgeon.—Upon being relieved, to report to commanding officer, Fort McDermit, Nevada, for duty as post surgeon.

White, R. H., Captain and Assistant-Surgeon.—To report to commanding officer, Angel Island, California, as post surgeon, relieving Assistant-Surgeon C. K. Winne.

Winne, C. K., Captain and Assistant-Surgeon.—Upon being relieved, to report to commanding officer, Benicia Barracks, California, for duty as post surgeon, relieving Surgeon C. C. Byrne.
Paragraph 1, S. O. 115, Headquarters Department of California, September 23, 1884.

Taylor, A. W., First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Omaha, Nebraska. Paragraph 3, S. O. 87, Headquarters Department of the Platte, October 3, 1884.

Everts, Edward, First-Lieutenant and Assistant-Surgeon.—Granted leave of absence for one month, with permission to leave the limits of the Department. S. O. 145, Headquarters Department of Colorado, September 24, 1884.

Black, C. S., First-Lieutenant and Assistant-Surgeon.—Granted leave of absence for fifteen days, to take effect this date. Paragraph 3, S. O. 131, Department of Texas, September 29, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM SEPTEMBER 28, 1884, TO OCTOBER 11, 1884.

Surgeon Henry Stewart, granted leave of absence for one year, with permission to leave the United States, October 15, 1884.

P. A. Surgeon John M. Edgar, detached from the "Nantucket," and placed on waiting orders, September 29, 1884.

P. A. Surgeon G. E. H. Harmon, to the Naval Academy, September 30, 1884.

P. A. Surgeon D. N. Bertolette, from the Naval Academy to the "Dolphin," October 4, 1884.

P. A. Surgeon Benjamin F. Rogers, to the Naval Academy, September 30, 1884.

Surgeon George H. Cooke, from the Naval Academy, and placed on waiting orders, October 2, 1884.

P. A. Surgeon Robert Whiting, from the Naval Academy, and placed on waiting orders, October 4, 1884.

P. A. Surgeon G. C. Lippincott, granted sick-leave, October 4, 1884.

P. A. Surgeon Robert Whiting, to the Naval Hospital, New York, October 6, 1884.

P. A Surgeon S. A. Brown, resignation accepted, October 7, 1884.

Surgeon George R. Brush, detached from the "Vandalia," and placed on waiting orders, October 8, 1884.

P. A. Surgeon Thomas C. Craig, detached from the "Vandalia," and placed on waiting orders, October 8, 1884.

Surgeon Joseph G. Ayers, leave of absence for one month, October 10, 1884.

Surgeon A. S. Oberly, to the Naval Hospital, Portsmouth, New Hampshire, October 10, 1884.

Medical Inspector C. J. Cleborne, detached from duty at Portsmouth, N.H., and placed on waiting orders, October 10, 1884.

P. A Surgeon John W. Steele, detached from the "Brooklyn," and placed on waiting orders, October 10, 1884.

P. A. Surgeon John C. Boyd, to duty at Navy-Yard, Washington, D.C., October 10, 1884.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 1, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON SYPHILITIC SEQUELÆ (TERTIARY SYPHILIS) RESULTING FROM SYPHILIS ACQUIRED IN UTERO.

BY FESSENDEN NOTT OTIS, M D.,

Clinical Professor of Venereal Diseases in the College of Physicians and Surgeons, New York.

TERTIARY SYMPTOMS OF INTRA-UTERINE SYPHILIS.

GENTLEMEN,—Here is a little, but not very young, patient, whom I first saw a few moments ago. He is 18 years of age. The grandmother, who is with the lad, intimates that the mother of the boy was of rather obscure origin, and claims that the difficulty in the case originated on her side. It was a year and nine months from the date of the marriage that this child was born; she further states that the mother and the father both had an eruption within that time. It is evident from the general appearance of this boy that he is suffering at the present time from the late lesions of syphilis. These lesions are in line with those which we were speaking about last week, changes in the bone-substance in various localities as a result of damage to lymphatic spaces and channels in various localities, and which, after periods varying from two or three to fifty or more years, become obstructed or obliterated, causing localized accumulation of lymphatic fluid and lymph-cells, constituting what is usually termed *gummy material.* This gummy material, as I have previously explained to you, has been found to form the only constant abnormal constituent of every lesion of late or tertiary syphilis,—whether the lesion be known as a *gummy tumor*, or a *tubercular syphilide*, or a *syphilitic node*, or any other sequel of syphilis. I have also shown you that this gummy material, so called, possesses neither corrosive nor contagious properties, but that the damage caused by its presence is chiefly, if not wholly, mechanical, causing destruction by pressure, obstruction of blood-vessels, etc. In our last lecture I called your attention especially to two forms of syphilitic sequelæ which were strikingly in proof of this statement,—viz., the tubercular lesions of syphilis, which often pursue their course without ulceration, and yet leave cicatricial depressions showing loss of tissue by absorption, from the mechanical influence of the gummy infiltration in the skin; and, secondly, the losses of bone-structure which, on the skull especially, cause depressions without either inflammation or suppuration. These syphilitic sequelæ were traced back, in every case presented, to an initial lesion of syphilis, and various characteristic lesions of the active or contagious stage of syphilis were shown to have intervened between the initial lesion and the sequelæ. The cases shown were all adults. In the present instance the patient is a child. Both its parents were subjects of an eruption, which, although eighteen years ago, the grandmother remembers distinctly to have been after the marriage, and before the birth of the child. She states that it was thought to be a bad disease, and claims that it was communicated to her son by the mother of this boy.

The grandmother states, further, that the patient was not much under her observation during its early childhood, but she observed its little neck, big head, and later, at five or six years, she saw an eruption which covered the entire body, leaving depressions or scars after its disappearance.

I think there can be no question, gentlemen, that this trouble was acquired in utero, and that the initial lesion was in utero; that is to say, that the initial period of the disease was in utero. Of course there was no localized abrasion; the poison was introduced into the circulation directly; there was no period of incubation. The description of the general appearance of the child as given by the grandmother suggests a syphilitic diathesis. The eruption she saw after the fifth year was not characteristic of the eruptions of the early stage of syphilis, but of the tubercular eruptions which in the adult appear at any period after the second—usually between the second and seventh—year.

As we strip this child,—for, although eighteen years old, in body and mind he is still a child,—we see numerous scars resulting from the tuberculous eruptions he has suffered from. But the most prominent evidence of the effects of the disease as we see it now is in the bones of the head and face, and on the cranium in par-

ticular. Passing my hands over the head, I find that there are evidences of that sort of bone-trouble alluded to last week under the subject of dry caries of Virchow,—a form of lesion of bony structure that is more characteristic of syphilis than any other lesion, and which is evidently the result of pressure of the so-called gummous material localized between the external and internal tables of the skull. In some cases this process goes on to ulceration, while in many others there is no ulceration from the first to the last. Consequently, as I before remarked, the term caries, as applied to this trouble, is a misnomer. The change is not the result of caries, as we cannot have caries without suppuration, without that peculiar form of destruction which comes on from an ulcerative process, and there is no ulcerative process here. We have present here several such points where there have been no open sores, while there is also, as you see, a large open bony ulcer on the top of the head. Here on the front part of the hairy portion of the scalp is a marked circular depression. It is said that the boy had a fall and struck there. The depression appears as though it might have been so caused, and yet it is the same sort of depression which occurs in similar cases without any inflammatory process whatever,—a swelling or a bulging which may disappear, and sometimes leaves a depression of bone, without any inflammation having been apparent during its entire course. Yet conditions may be present which shall lead to suppuration in some cases. Let, for instance, the gummous tumor go on to a considerable size and attract attention, while the patient is in good condition there will be no special trouble from it; but if he be in depressed condition a suppurative process may commence which will go on (often producing great havoc in the bony tissues) until arrested by a change in the patient's circumstances or by treatment. So that depressing influences, anything to deteriorate the condition of the patient, may change a so-called simple dry caries into an open ulcerative condition, such as you see here. I have often seen these nodes of considerable size develop without pain of any consequence, without evidence of inflammatory trouble, and then disappear more quickly than they arose, under the influence of the mixed treatment,—the mercurial and the iodide of potassium,—within perhaps a few weeks, whereas if they had been let alone an inflammatory process might have been set up, when this material would have taken on suppuration, and there would have been true loss of tissue by ulcerative process.

We notice here that the bones of the nose have been carried away; there has been loss of bony material of the forehead, and general disfigurement of the head and body. This boy, eighteen years of age, is not larger than most boys of five. The effect of the disease has been to stunt, retard the growth in every respect. Exactly how it does so is pretty difficult to say. But where we find a positive lesion, a localized point of trouble, in these cases, it is in line with what we know occurs late in specific disease in the adult, and the same course of treatment would be indicated. The chief interest in the case is the history of the acquirement of the disease in utero, and its illustration of the fact that when so acquired it develops exactly the same as when occurring in the adult.

What I wish particularly to demonstrate and illustrate by this case is that the disease pursues the same course in every living organism as far as that organism is capable of developing it,—in the infant, in the youth, in the adult,—apparent differences being readily accounted for by the differences in the maturity and stability of the tissues; that while in this case we have a history of so-called hereditary syphilis, the conditions in which it has resulted do not differ in any respect from syphilitic sequelæ following acquired syphilis in the adult; that the lesions are not the effect of a vitiated *hereditary diathesis*, but, as far as a single case can go, it gives support to the view I have long held, that syphilis in the infant, in the embryo, or the ovum, is the result of direct contact of its germinal cells with the contagium of syphilis through the blood of the mother. The claim often made that syphilis is or may be communicated to the embryo through the influence of the male parent directly is disproved by the fact, demonstrated by the experiments of Mireur and others, now accepted by all recent authorities, that the semen does not contain the contagious property of syphilis. Syphilis must, then, first be communicated to the mother before it can reach her unborn child. According to the views previously set before you demonstrating the

material nature of syphilitic infection, the first requirement to that end is an organism free from syphilis; second, contact with the syphilitic contagium or principle. It has been practically demonstrated that the secretion of the sequelæ of syphilis, the so-called "gummy material," is free from a contagious property. The contagium of syphilis is comparatively short-lived; the contagious property in the blood has been so amply proved by the statistics of Fournier that it must be accepted as a rule that it does not last more than two or three years.* The power of this contagium, then, to transmit disease through generations cannot be admitted, any more than the power of the contagium of smallpox. This position is the legitimate and necessary sequence of the material views of the nature and behavior of syphilis which I have held and taught for the past fifteen years. Mr. Jonathan Hutchinson, in his lectures on the "Pedigree of Disease" in 1881 (published in London, 1884), says, page 90, "A child, then, I assert, *inherits syphilis in precisely the same sense and in precisely the same manner as it may inherit smallpox.* It inherits, not the *diathesis*, but the *disease.*" "The reason why," he says, "the inheritance of smallpox is very rare, whilst that of syphilis is unfortunately common, is simply that the period during which the virus is extant in the blood is very different in the two cases." He claims that the clinical facts generally known in regard to the syphilis of infants afford proof that the *diathesis* of syphilis is as incapable of transmission as that of any of the exanthemata, and he concludes that "*no mitigated transmission is possible;* that the child gets either nothing at all, or the germs of the disease, and that in the latter case they will, subject to the laws of idiosyncrasy, develop equally in all cases." Mr. Hutchinson, generally conceded to be the greatest English authority on syphilis, thus distinctly supports the germ theory of syphilis, and carries it to the legitimate conclusion that the disease is confined in every instance to the individual organism infected, and hence that it is incapable of being acquired or communicated through hereditary transmission; in other words, that *there is no such disease as hereditary syphilis*, any more than there is an hereditary smallpox, and that in every case of syphilis the disease is *acquired* through contact with a disease-germ of syphilis in an organism previously free from that disease, whether it occurs in the ovum, the embryo, the fœtus, the infant, or in the adult. This is exactly the position which is taken by me in the chapter on "Syphilis of Infants and Hereditary Syphilis," in my book on Genito-Urinary Diseases and Syphilis, published by Bermingham & Co., New York, 1883, page 204 *et seq.*, and more fully discussed in an article prepared for the second edition of that work and published, from advance sheets, in the first number of *The Esculapian* (edited by Ed. J. Bermingham, A.M., M.D.), New York, January, 1884. If, then, as has been shown, the semen does not contain the contagium of syphilis, the male parent cannot transmit it directly to his offspring. The mother must first acquire the disease; and it is only through the disease-germs of syphilis circulating in her organism that the product of conception can be infected before birth. The disease thus acquired, —in accordance with the views of Hutchinson, previously quoted, and in accordance with the views I have advanced, —"subject to the laws of idiosyncrasy, develops equally in all cases."

It is undoubtedly the fact that much disease in fœtal and in infantile life results from pre-existing disease the legitimate sequel of syphilis in the organism of the mother; but that any syphilitic disease proved to be such by its power to transmit syphilis has been communicated to healthy persons, by infants conceived after the active or contagious stage of syphilis in the parents has passed, there is no well-authenticated evidence to prove. And this stage, as has already been stated, has been shown, by ample testimony, not to extend over a period of three or four years.

The pathology and treatment of the late lesions or sequelæ of syphilis will be made the subject of consideration in a subsequent lecture.

G. P. PUTNAM'S SONS will shortly publish, by arrangement with the Vienna publisher, a translation, prepared by Dr. Barney Sachs, with the authorization of the author, of Dr. Meynert's Treatise on Psychiatry. The first part of the work, devoted to the anatomy and physiology of the brain, the publishers hope to have ready by the beginning of the new year. The work will be fully illustrated.

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*See Otis on Syphilis and the Genito-Urinary Diseases, Bermingham & Co., New York, 1883, p. 167 *et seq.*

ORIGINAL COMMUNICATIONS.

TEN CASES OF EXTRA-GENITAL CHANCRE.

WITH REMARKS.

BY ARTHUR VAN HARLINGEN, M.D.,

Professor of Diseases of the Skin in the Philadelphia Polyclinic.

THE possible occurrence of chancre at other points than about the genitals should always be kept in mind. The statistics of Mauriac and other French observers show that of 3145 chancres 184 were extra-genital, and in private quite as much as in public practice we must be prepared to meet innocent-looking sores, pimples, or abrasions arising no one knows how, and developing into well-marked chancres followed by the general symptoms of syphilis.

It is with the view of drawing attention to the symptoms displayed by certain among the more commonly occurring extra-genital chancres that I have brought together the following cases. They have come under my notice in a practice which is not venereal, but dermatological, and which has included a comparatively small number of cases even of genital chancre, though a large number of syphilitic cases in the later stages come under my observation from one year's end to another.

CASE I.—CHANCRE OF THE LOWER LIP FROM A BITE—DIAGNOSIS OF EPITHELIOMA—EXCISION, FOLLOWED BY GENERAL SYPHILIS.

Elizabeth C., a woman of 52, consulted me on December 12, 1874, suffering with a generalized papular syphilitic eruption which had lasted about three weeks. On making inquiry, I found that three months previously, while toying with a man of suspicious character, she had been bitten upon the lower lip. The sore healed over, and she thought no more of it for several weeks, when a swelling began to show itself in the locality, which enlarged until it became half the size of a hazelnut, when the surface broke down into a running sore. Much alarmed, the patient sought advice of an eminent surgeon, who pronounced the sore a cancer and cut it out. The wound healed over quickly, but within a few weeks a fresh induration made its appearance in the site of the former one, while an eruption began to appear over the body generally. On examination, a small hazel-nut-sized induration was observed under the cicatrix of the operation, together with the general papular eruption noted above. The patient was placed upon appropriate treatment, and the lesion soon disappeared.

The peculiar interest of this case lies in the fact that an eminent surgeon, accustomed to seeing cases of epithelioma of the lip, failed in distinguishing the character of the lesion. The age of the patient certainly pointed to the possibility of epithelioma, while making contagion in amatory converse less likely.

CASE II.—CHANCRE OF THE UPPER AND LOWER LIPS FROM SIMULTANEOUS INOCULATION BY MEANS OF A BITE—TRANSMISSION OF THE DISEASE TO VARIOUS MEMBERS OF THE PATIENT'S FAMILY.

Maggie M., 15 years of age, had connection on November 14, 1876, with a young man whose history is not known, but who showed no signs of disease about the genitalia. She received no injury either to the genitalia or to the mouth at the time, but four weeks later a small sore appeared on the right half of the lower lip. No treatment was employed, and but little change took place in the appearance of the sore for a fortnight, when it seemed to suddenly spring into activity, the lower lip became swollen and raw, and a similar sore made its appearance on the opposing surface of the upper lip. A "lump" also appeared in the throat, and the patient began to experience general malaise, with pains in the bones, etc. About this time she came under the observation of a physician, who failed, however, to make a correct diagnosis, declaring the sores on the lip to be fever-blisters, and the swollen tonsils simple sore throat.

There had been, therefore, practically no treatment employed until the patient came under my notice, on February 28, 1877. At this time she presented well-marked indurated chancres of the upper and lower lip, the enlargement being in each case at least the size of a filbert and covered with a shallow ulcer. The lips were so swollen that they could not be brought together, and there was dribbling of saliva, with difficulty in taking food. The sublingual and submental glands were involved, and there was marked periosteal tenderness over the forehead. Under careful and continuous treatment she entirely recovered, but not before infecting her infant sister, who, in turn, infected her mother and a brother. Thus the entire family, with the exception of one brother, who appears to have escaped infection, contracted syphilis directly or indirectly from this undiagnosticated case of chancre of the lips.

CASE III.—CHANCRE OF THE COMMISSURE OF THE LIPS IN THE HUSBAND—CONTAGION TRANSMITTED LATER IN THE HISTORY OF THE DISEASE TO THE WIFE, PROBABLY BY MUCOUS PATCHES ABOUT THE GENITALIA.

William P., a man of 30, presented himself on March 25, 1878, showing a sore at the left commissure of the lips. This had appeared in the form of a "fever-blister" about two weeks after certain toyings with a prosti-

tute which did not involve connection. It was quite insignificant at first, but was accompanied from the beginning by a glandular swelling under the chin. A few days later the lesion began to enlarge and indurate, while the glandular development became constantly more marked up to the time of his examination. The sore was then in the form of a shallow erosion with a deep fissure extending into the labial commissure, and induration to the size of a cherry. The submental glands were markedly enlarged, although the general swelling was not so great as it had been some days previously.

The patient continued under my care and observation for more than a year, suffering with quite extensive mucous patches about the mouth and anus through the summer. While these lesions were at their height, he had connection with his wife, who consulted me on September 16 for a chancre of the left labium major of several weeks' duration. This ran the usual course, and was followed by a generalized eruption with mucous patches, the woman remaining under my care until April, 1879, when she was discharged cured.

CASE IV.—CHANCRE OF LOWER LIP, FOLLOWED BY MUCOUS PATCHES.

Annie P., 23 years of age, consulted me on December 20, 1880, for a persistent sore occurring upon the lower lip. She was engaged to be married to a man of questionable habits, and was probably infected by him through kissing, the date of which she was able to fix as August 1 previous. The sore was first noticed upon the lip two weeks subsequently. It grew hard and lumpy, and remained in this condition under local treatment until about November 15. Then a generalized eruption of a maculo-papular character appeared, accompanied by general malaise and mucous patches upon the tonsils. When examined, the remains of the initial lesion could still be seen on the lip, accompanied by some induration, and together with this a number of mucous patches on the upper lip and about the mouth. The patient was under treatment about a year, suffering occasional relapses of the mucous patches, but was finally discharged cured.

CASE V.—CHANCRE OF THE UPPER LIP PRESENTING AT FIRST MARKED DIFFICULTY OF DIAGNOSIS, FOLLOWED BY GENERALIZED SYPHILIS.

Kate C., a domestic, 24 years of age, was brought to me on the 7th of last May, by a well-known practitioner of this city, for the purpose of making an exact diagnosis of a suspicious sore upon the upper lip. No history of contagion was obtained. The sore had first appeared as an insignificant abrasion six weeks previously, and had gradually grown to its present size, giving rise to considerable burning sensation at first, but later being quite without feeling.

On examination, a peculiar lesion was found on the centre of the upper lip at the mucocutaneous juncture. This was a firm elevation the size of a ten-cent piece, flat, rising abruptly to the height of an eighth of an inch or more, and seated on a rather firm, inflammatory-looking mass of induration, which could be felt through the tissues of the lip and which was about the size of a small hazelnut. The lesion was of a dusky-red hue, and its surface, abraded and raw in the centre, showed a ring-formed, ill-developed vesicle about the circumference. Just within the lip on the mucous membrane was a lunular shallow herpetic ulcer with a yellowish base. The submaxillary lymphatic glands were markedly enlarged, particularly those on the left side. There were no general symptoms.

The gentleman in whose charge the case had been was inclined, chiefly from circumstantial evidence, to believe that the sore had been contracted by contagion and was syphilitic in character. But, judging simply from the appearances presented, I did not feel prepared to pronounce positively at the first examination, but took the case under advisement. In order to be on the safe side, however, we cauterized the abraded surfaces lightly with nitrate of silver to afford a protective surface, and cautioned the patient against coming into contact with other persons.

She was seen again on the 12th of May, when the sore had already begun to diminish in size and the glands were less swollen. At her third visit, on the 24th of the month, the lesion on the lip was somewhat larger again, being now an indurated lump the size of a split marrow-fat pea, of a pinkish color and without abrasion, while the glandular engorgement under the jaw was decidedly diminished. There were engorged glands in the post-cervical region quite perceptible to the touch, and a generalized sparsely-distributed papular eruption could be seen covering the limbs and neck and to a less degree the body. The mucous membrane of the pharynx was red and congested, but no mucous patches could be found here or anywhere about the mouth. The patient had suffered with severe nocturnal headaches for a week or more previously, coming on after midnight. She had also lost much flesh of late. The patient now confessed that she had frequently of late been exposed to contagion through the mouth from a suspicious quarter, but had never indulged in sexual intercourse.

The chief interest in this case lies in the extreme difficulty of diagnosis. The initial lesion when first seen by me resembled nothing so much as a lesion of herpes iris. The peculiar dusky-pink color, the circinate, partly-developed vesicle, and the evident tendency to spread on the periphery all were strongly in favor of that

affection. It is true that the glandular engorgement was suspicious; but still this, like a bubo in the groin, might have come from a sympathetic irritation due to a simple inflammatory lesion. Here a sure diagnosis seemed impossible until general symptoms developed, but superficial cauterization was practised to establish protection against contagion,—a precautionary measure which I should strongly urge in all cases of the kind.

CASE VI.—CHANCRE OF THE COMMISSURE OF THE LIPS DUE TO A BITE, AND FOLLOWED BY GENERAL SYMPTOMS.

Charles S., 43 years of age, consulted me on August 18 last, suffering from a lump and sore at the left commissure of the lips. His account of himself was that on the 16th of June he had been bitten in the mouth by a prostitute who showed some signs of an eruption about her person. No sexual intercourse had taken place at this time, nor for some months previously.

Within two weeks from the date of this accident the patient began to observe a "pimple" in the left commissure of the lips, which became fissured, and grew in size for several weeks, coming to a stand-still a week or so before I saw him. At that time—two months subsequent to contagion, and six weeks after the appearance of the initial lesion—the patient presented a hickory-nut-sized mass of induration at the left commissure of the lips, at which point was a deep callous fissure extending half an inch inside of the mouth and about a quarter of an inch outside. Within, the buccal mucous membrane showed a silvery-gray roughened eroded patch, while outside a shallow ulcer, the size of a ten-cent piece and of a roundish outline, could be seen on a sharply-defined hard base. Taking the cheek between the thumb and forefinger inside and outside of the mouth, the sharply-defined nodular character of the chancrous induration could be very distinctly felt. The sublingual and submaxillary glands on the affected side could be felt distinctly, although not very markedly enlarged. The post-cervical glands were well marked to the touch. The genitals were closely examined, but showed no sign of disease.

The fissure and erosion within the mouth were touched with dilute solution of nitrate of mercury, while a plaster containing ung. hydrarg. was applied to the external sore. The patient was strenuously warned of the danger of contagion.

Under the local treatment the sores healed over entirely within two weeks, while the indurated lump became lessened in size by nearly one-half. At a visit paid a week after the patient's first appearance I caused him to strip completely, and then found him displaying a well-marked profuse macular eruption, the existence of which I pointed out to him to his great surprise. The patient was then at once placed upon mercurial treatment, and is still under observation, the initial lesion having now almost entirely disappeared.

This series of cases does not include all that have come under my notice. Several others I have refrained from publishing because the evidence of their existence was only circumstantial, although to me convincingly strong. The chief interest in these cases lies, I think, in their comparative frequency, in the simple and innocent manner, so to speak, in which they were contracted, and in the great liability to errors in diagnosis on the part of the practitioner, with possible disaster from contagion to others as the result.

In speaking of these chancres of the lips, Mauriac says that they may occur in any form, minimal, very superficial, epithelial, and erosive, like a patch of herpes, scarcely indurated, and impossible to diagnosticate except for the submaxillary glandular engorgement. On the other hand, they may be very large, and Mauriac speaks of two which were as large as a walnut or a lady-apple, and situated upon the lower lip. Of these varieties only the last is represented in the cases above noted, Case II. being one where the general induration, swelling, and deformity were present to a marked degree. My other cases are of an average character, none, as seen by me, presenting the minimal appearance described by Mauriac. The commoner forms of chancre of the lip are flat or rounded, pseudo-membranous upon the mucous membrane inside of the lip, and crusted when occurring outside on the skin. The slight fissures about the lips, so common in some individuals, are very easily inoculated, and are converted into fissured chancres. The most positive sign that we have to deal with chancre of the lip is the involvement of the submaxillary glands. Occasionally, however, we may meet with this same condition following a simple sore of the mouth. Of course the occurrence of general symptoms will settle the diagnosis, and these, in the form of malaise, headache, lassitude, and loss of flesh, with occasionally pains in the bones and joints, are to be looked for in all suspicious cases which can be kept under observation. The occurrence of a general eruption must, of course, be looked for, and, as this when macular may escape the

patient's observation, it is as well to draw his attention to the possibility of such an occurrence, and to examine the chest, abdomen, and trunk generally from time to time, as well as the more visible parts of the skin, to be sure that a transitory macular rash does not escape notice.

Chancres of the lip are sometimes painful. They are very apt to crack and bleed, particularly when situated in the median line. Considerable tumefaction of the surrounding tissues may take place, especially when the chancre is situated on the lower lip, so that a sort of prolapse of this member may occur, the lip falling out and down on the chin. The induration in these cases is sometimes diffuse, but it is always firmer than simple inflammatory induration, and in the body of it the lesion itself can be felt as a still firmer circumscribed hardening. On the mucous surface of the lips the chancre is nummular, flat, or slightly elevated, and is rarely ulcerated.

The enlargement of the submaxillary glands, which was not very marked in any of my cases, and in some of them was so slight as to escape mention in the notes, occasionally attains considerable proportions and causes a diffuse tumefaction of a part or the whole of the buccal floor. For this reason, patients with their puffy, indurated lips and swollen lower jaw sometimes, at first sight, resemble scrofulous persons.

CASE VII.—CHANCRE OF THE TONGUE, FOLLOWED BY GENERAL SYPHILITIC SYMPTOMS.

Bessie O'S. was one of a group of male and female attendants in a public institution in this city who carried into practice advanced communistic ideas on the subject of syphilitic infection. That which each possessed was shared by all the others. Peter O'C. was under my care with stubborn mucous patches about the tonsils, and later on the commissures of the lips, and about the velum palati and anterior half arches. He was under my observation and care from January to April, 1878. Some time in January the patient conveyed the syphilitic contagion to Mary B., at least so this patient informed me two years and a half later, when she came under my care for late ulcerated lesions of the forearm. When Bessie O'S. consulted me, on February 2, 1878, Peter O'C. was in full tide of syphilis in the mouth. Whether he was the source of her contagion or not I do not know. She told me she had a friend, "Mr. R.," among the attendants, who frequently kissed her, and this friend may have been Peter O'C., or another member of the group. However this may have been, her history was as follows. About December 10, six weeks to two months previously, she observed a small sore near the tip of her tongue, and two weeks later was attacked by a violent sore throat which confined her to bed and which was called diphtheria. From that time until the date of her examination she had failed a good deal in flesh, and when I saw her she looked pale and anæmic to a marked degree. There were no lesions on the body. On the end of the tongue, a little to the left of the tip, could be seen a small roundish ulcer, pin-head-sized, and covered with a gray slough. This was seated upon and surrounded by a mass of induration the size of a large marrow-fat pea split. On touching the lesion with a pointed stick of nitrate of silver, the central slough was wiped away, showing a raw moist surface beneath. The tonsils were swollen, and showed very shallow mucous patches.

Placed upon active treatment, the patient recovered her health, the induration gradually disappeared, but mucous patches kept on recurring during six months. In the autumn the patient returned with a squamous and incipient pustular eruption about the toes, and later new mucous patches appeared in the mouth. She disappeared late in the autumn, still not entirely cured.

I have no comment to make on this case, other than to point out that the lesion on the tongue was evidently the initial lesion of the disease, and that when I saw it it had probably taken on the appearance of a mucous patch, while still retaining the characteristic induration. I regret that my scanty notes give no intimation of the presence or absence of subhyoid or other lymphatic engorgement. This could not have been at all marked.

CASE VIII.—CHANCRE OF THE FACE CONTRACTED IN SHAVING, AND FOLLOWED BY MARKED GENERAL SYMPTOMS OF SYPHILIS.

James F., 53 years of age, consulted me on July 17, 1882, giving the following history. Six weeks previously he had been shaved at a barber's shop of a suspiciously dirty character, in a low quarter of the city, and had been cut in the face just to one side of the chin. Two or three days later, so the patient asserted, a slight enlargement commenced to show itself at the seat of the wound, which increased gradually and progressively in size until, at the time of my examination, it presented itself as a smooth, firm, reddish lump, the size of a hazel-nut, seated in the tissues of the cheek. The surface was unbroken; there was no tendency to ulceration or even abrasion. The submaxillary lymphatic glands

were very much enlarged, and the post-cervical glands also showed considerable engorgement. The suboccipital and supra-trochlear glands were not perceptible.

A few days before I saw the patient his throat had begun to show symptoms of soreness, and on examination a mucous patch could be seen under the tongue, and pain referred to the laryngeal region seemed to indicate the presence of a lesion at that point. A generalized macular eruption was displayed over the body, limbs, and palms of the hands, with a few papular lesions here and there.

The patient was placed upon mercurial treatment, under which the lesions gradually disappeared. He fell away in flesh greatly at first, and became quite emaciated, but gradually recovered, and when last seen, about the end of December, showed no lesions excepting a few mucous patches about disappearing.

Although it is not an uncommon thing to find patients attributing their syphilis to inoculation by means of a razor, yet the actual occurrence under the eye of a chancre due to this method of inoculation is rare. In this case the disease showed itself with more than the average severity, as shown by the unusual emaciation and weakness of the patient. No malignant eruptions (as ulcers, etc.), however, were manifested.

CASE IX.—MAMMARY CHANCRE, FOLLOWED BY LONG-CONTINUED, VARIED, AND REBELLIOUS GENERAL SYMPTOMS.

Elizabeth B., 28 years of age, first came under my care on April 12, 1876. Eight weeks previously, her lover, who she said always suffered with sore mouth and cracked lips, while toying with her bit her left nipple slightly. The trifling wound passed unnoticed for about two weeks, when she observed a small pimple upon the nipple. This soon became larger, moist on the surface, and painful, and the breast became inflamed and hard. Between five and six weeks after the wound of the nipple occurred, a scanty papular eruption made its appearance over the body, and the patient's health began to fail. She suffered malaise, pains in the bones, and general constitutional disturbance. Within a day or two previous to her visit to me the patient began to feel symptoms of sore throat.

On examination, the initial lesion appeared as a semilunar or crescentic ulcer the size of half a dime, situated at the outer border of the areola; the surface, sloping gradually from the edges, which were not raised or everted, showed an eroded cavity covered with yellowish débris and exuding a small quantity of sero-pus. The sore was situated on a base of cartilaginous hardness surrounding it like a ring and raised somewhat above the general surface of the skin. There was a sparse but well-marked papular eruption scattered over the body and limbs.

Placed upon treatment, the initial lesion and the papular eruption gradually disappeared, but a series of mucous patches and the bad condition of the patient's general health necessitated tonic as well as specific treatment continued through a long period. In August, only six months after the initial lesion, a rupial sore appeared upon the leg, and the patient was emaciated and enfeebled, but by the end of the year she seemed entirely well. She was under observation for three years, suffering from gumma of the tongue, serpiginous ulceration over the sole of the foot, etc.

CASE X.—CHANCRE OF THE LOWER EYELID CAUSED BY INOCULATION THROUGH A PUNCTURED CONTUSION—CONFRONTATION WITH THE SOURCE OF THE DISEASE.

As this case shall be reported in full elsewhere, I shall only give the chief points. The lesion occurred in a young man who received a blow below the left eye at the hand of a friend. The immediate tumefaction being considerable, the contusion was punctured with a penknife and sucked by the friend. The sore, a typical erosion on an indurated base, developed in due time, and was seen by me when at its full development. I looked up the friend within a few days, and found him in full tide of florid syphilis, with mucous patches covering the inside of his mouth and the side of his tongue.

I might almost double the number of cases of extra-genital chancre above given if I should include all those which have come under my notice. I have, however, omitted all in which I have not myself seen the initial lesion and followed its evolution so far as to be able to give evidence as to its true nature. My object, as I have already said, has been to point out the daily possibility of the occurrence of chancre of this nature, and to indicate some of its features, and, since I have not intended to write a complete article on the subject, I have not thought desirable to give a list of references. Bumstead and Taylor's well-known work, and the files of the *American Journal of Syphilography and Dermatology* and the *Archives of Dermatology*, afford perhaps the best field for any one desirous of informing himself of the cases of extra-genital chancre reported of late years in English. The French text-books, Fournier and others, with the *Annales de Dermatologie et de Syphiligraphie*, afford a still larger list of cases.

THE EXAMINATION OF APPLICANTS FOR LICENSE TO PRACTISE — A MEANS OF RAISING THE STANDARD OF MEDICAL EDUCATION.

BY EDWARD JACKSON, A.M., M.D.,
Philadelphia.

Read before the American Academy of Medicine at the meeting held in Baltimore, October 28, 1884, *and recommended for publication by the Council.*

THE development of educational institutions may be likened to the development of races of living beings, in that it is determined by what may be called inherent tendencies directed and controlled by external influences. In the case of medical schools, the inherent tendencies reside in the *personnel* of their faculties and the systems of their organization. The external influences, or environment, are to be found in the attitude of the medical profession and the general public towards them and their work, in the bearing of legal enactments upon them, and in the education and desires of the classes from which they have to draw their students. And here, as in the evolution of living beings, environment has full sway over inherent tendencies, fostering such as are in harmony with it, defeating and overcoming those that are not.

Movements for the improvement of medical education have heretofore worked too much on the supposition that the schools could change everything themselves, failing to realize that they are hedged about by influences and bound down by laws of competition against which any effort they may make is practically powerless. I believe that more may be accomplished by so changing the environment of medical schools as to bring it more fully and directly in harmony with all the efforts they may henceforth make to raise their educational standards. As one of several movements tending towards such a change of environment, I ask you to consider the establishment of State boards of medical examiners, whose certificate of fitness should be the only legal qualification for the practice of medicine.

Medical education will only reach a proper standard and properly keep pace with the progress of the time when there is between those engaged in medical teaching a direct and controlling competition to excel in the thoroughness and practical value of the instruction they give. In this country there is now no such direct and controlling competition. Why? In the first place, there is no direct competition because no part of the general public has the opportunity of passing on the merits of more than a few of the schools, and its judgment of them must be based on such knowledge as it can get of the acquirements or deficiencies of a very few of their graduates, perhaps but one or two from each, and these, as is generally understood, may be entirely exceptional among their fellows in the fulness or meagerness of their attainments, the diploma of every American medical school being bestowed on men representative of both the extremes of medical knowledge and medical ignorance. We of the medical profession cannot estimate the goodness or badness of the teaching in the various medical schools of the country, because we have no data upon which to found such an estimate, and the general public, with no more data than we have, are far less able to judge of the matter, if such data were furnished them.

Again, in the absence of direct competition to excel in thoroughness of teaching, such competition as there may be in this direction does not and cannot control the policy of the schools. This is so because most medical teachers are also engaged in other business; and the advantage that accrues to them from medical teaching accrues in other ways than by the reputation for teaching well. In this country the professors control the medical schools. They are unhampered by State control or conditions of endowment, and the board of trustees exists rather as a figure-head or a technicality. And in every faculty, if there be any who look to medical teaching to furnish the larger part of their income, or who base upon it their hopes of fame, they constitute an insignificant minority. To the large majority of teachers the chief rewards of medical teaching are the opportunities it offers for the enlargement of practice and the attainment of fees, or material for original research. The professorship is a certificate given by the board of trustees, but representing the judgment of the medical faculty, that its holder is eminent in a certain particular department of medicine; a certificate that is advertised to the profession and to the general public in the published circulars and announcements of the school,

and by appended title, and by word of mouth. It is a certificate worth having. Then, again, simply to stand in the relation of teacher to young men, many of whom will go out to take prominent positions in the community, is to have an opportunity for achieving reputation and attracting clients that is almost unequalled.

It is, perhaps, not accurate to say that we have no data upon which to grade the different medical schools of the country. There is one way, and only one, in which we might, or the general public might, arrange them; they might be arranged according to the size of their classes. By that, and only by that, can we judge of the success they achieve, and inferentially of the success they deserve. So, whether the medical teacher finds the chief advantage of his position in the fees he receives for teaching, in the opportunities for practice that his teaching opens up to him, in the material it brings him for original research, or in the reputation and influence that come from the teaching itself, the extent of that advantage is measured by the number of students he teaches.

The existent competition is for large numbers of students, and to secure them the first attraction that the schools have to offer is the degree of Doctor of Medicine. This degree has been borne by many great men; it has become, in this country, the badge of membership in a so-called liberal profession; but a more weighty consideration than these is the fact that it is required by public opinion, and in some States by statute law, as a prerequisite to entering upon the business of medical practice. As matters now stand, medical schools use this degree not to honor themselves in the eminence of those upon whom it is bestowed, not to guarantee to the public the professional fitness of those who bear it, but as a bait to draw students. And it draws the student not by the honor which once clothed it, but has now departed, but because in the present state of public opinion and statute law he must have the degree before he can undertake, with any fair prospect of success, to make a living by the practice of medicine.

The other means by which a school attracts students need not be dwelt upon. Suffice it to remind you that chief among them is the reputation of individual members of its faculty as compilers, original investigators, or practitioners, not as teachers.

Then come the boasted attractions of museums, libraries, and clinical facilities, that make a fine display, but which are of little value to the student until he has considerably advanced in his acquirements, —farther, indeed, than many get before graduation. After these come free scholarships, cheap boarding, etc.; but on the list of attractions, strictness in the requirements for graduation comes last, or more generally is omitted entirely.

Now, it seems to me that the change most urgently needed in the influences bearing upon medical schools from without is that which will deprive the degree furnished by the schools of its purely trade value as a preliminary to money-getting, and will substitute for it a certificate of the attainment of a certain minimum standard of knowledge of the arts and sciences of medicine, given by a board of disinterested examiners acquainted with those arts and sciences and with the needs of the community. The creation of such a tribunal, furnished, in the persons of medical graduates of various schools, with the needful data, and competent and interested to pass impartially upon the thoroughness of the teaching those graduates have received, would establish that direct competition for thoroughness that is so much needed, and would go far towards giving such competition a controlling influence. If the relegation of the medical degree to its proper place as a scholastic honor pure and simple did not induce the schools to sufficiently respect their reputations in conferring it, the publication of the fact by the rejection of their graduates would certainly have the desired effect.

Other sufficient reasons for the establishment of State boards of medical examiners could be discussed, but it is only the influence which they might exert over medical education that I would urge here, and from the point of view that such an influence is one of their most valuable and important functions, I wish to say a few things as to their constitution and how they should go about their work. Their work is not to confer medical honors; it is simply to protect the public from gross ignorance in its medical advisers, and incidentally to remove from medical schools the temptation to swell their classes by the pretended education of men unfit to acquire a knowledge of medicine.

I believe that it would be entirely prac-

ticable, and in many respects it would be most advantageous, to have but a single examining board in each State. The responsibility would then be undivided. Its doings would attract more general attention than would the work of a number of boards, each of but local importance. It might, from time to time, hold examinations in various parts of the State, if that were considered necessary; but certainly the fairness of the test and the weight of the verdict would be greater to have all applicants go before a single board.

That no law can be secured or enforced which does not take cognizance of certain dogmas or so-called schools of therapeutics is certainly true of many parts of the country, and this constitutes one of the serious obstacles to any such progress as we are hoping for. My own preference would be, that it should be met by not examining with reference to therapeutics through the agency of drugs, since, even aside from exclusive dogmas, but few lines of drug treatment are entirely agreed upon by the regular profession, and it would be impossible to examine applicants with fairness upon matters of individual preference and opinion. Probably, however, a more popular way would be to hold such examinations, and to provide for the so-called schools of medicine by giving homœopathists and eclectics representatives in the boards, with authority to pass, on that particular branch, such applicants as might desire to be examined by them. I see no very serious objection to some such plan, since the unity of the healing art would be sufficiently vindicated by the single examination on all other branches.

The examiners should receive a fixed compensation, in no way dependent upon the number of applicants examined or passed by them. The superiority this alone would give the State board over the faculty of the medical school need not be dwelt upon. For similar reasons, the examiners should not be involved in the business of medical teaching; neither should they be chosen by those engaged in teaching, but rather by bodies representative of the profession, as the State medical societies, or by the representatives of the whole people, the governors or legislatures of the States.

The examiners should have long official terms, which should not expire simultaneously, such a provision being necessary to secure stability and continuity in the policy of the board.

The examinations should, as far as possible, be written, for written examinations, besides being most easily made fair, uniform, and thorough, can be matters of record. But above all they should be practical.

In conclusion, let me reiterate my most earnest belief that such State boards should have for their function the examination of applicants for the license to practise, and not the endorsing of the diplomas of certain medical schools, for the public is more abused by the disparity in the attainments of men receiving their degrees from the same faculty than by any disparity existing between the requirements of the different schools that lay any claim to respectability. Such boards might have their sphere of usefulness increased by power to conduct or supervise examinations in the branches of learning that fit men to become students of medicine, but this, and the right to be influenced by considerations of moral fitness or unfitness of the candidate, should be the only extension of their powers. Let them attend to their principal duty, without hinderance from diverse and distracting interests and responsibilities.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
Philadelphia.

(Continued from page 43.)

NEURALGIA, CHIEFLY IN THE TRACT OF THE SECOND BRANCH OF THE TRIGEMINUS, CAUSED BY AN EXOSTOSIS IN THE EXTERNAL AUDITORY CANAL.

POLITZER gives a *résumé* of an article on this subject by Moos in the *Annales des Maladies de l' Oreille, du Larynx*, etc., May, 1884.

The patient, in this instance, complained originally of an abscess in the ear, followed by a purulent discharge. In March, 1883, there occurred a painful swelling of the right external auditory canal, soon followed by attacks of violent pain, occurring sometimes in the morning and sometimes in the evening,—at first at long intervals, but finally more frequently and with increasing intensity. These pains affected

chiefly the region of the second and third branches of the trifacial nerve. The right jaw especially became so sensitive in chewing that finally the patient chewed only on the left side.

Examination of the ear revealed in the right external auditory canal three exostoses about as large as a pea, situated on the posterior, the superior, and the anterior walls respectively. These were nearly in the same plane and very close to one another. Upon touching these with a probe, the patient was positive that from the hindmost of them the attacks of pain took their origin. On the 9th of July, 1883, Prof. Moos removed the posterior exostosis by means of two incisions with a small bistoury. The superior one was left intact. The anterior exostosis was incised. After the bleeding ceased, the external auditory canal was plugged with boric acid and salicylated cotton-wool. Immediately after the operation the pains ceased, and have not returned, and on the same day, for the first time in many months, the patient was able to chew upon the right side of his mouth. Subsequently some granulations sprang up, and there was a purulent discharge, which, however, soon diminished and finally ceased entirely during a course of baths at Ragatz.

The original cause of the formation of the exostoses was probably a chronic purulent inflammation. It is very certain that at the seat of their development there occurred a tension and a torsion of one of the branches of the trigeminus, to which can be attributed the painful paroxysms of the disease.

THE TREATMENT OF SUPPURATIVE OTITIS MEDIA.

Bürkner (*Berlin. Klin. Wochenschrift*, No. 1, 1884) holds that, in addition to nitrate of silver in strong solutions (Schwartze) and powdered boric acid (Bezold), a valuable remedy for suppurative otorrhœa is found in corrosive sublimate and in the red precipitate of mercury. He has employed corrosive sublimate in two forms,—viz., by injections, and by instillations into the auditory canal. For injections he advises the one-per-cent. solutions of the sublimate, employing them in cases of fetid and abundant suppurations of the middle ear. For general use, however, he prefers warm instillations in the form of aqueous or alcoholic solutions 0.05 in strength. The use of more concentrated solutions has not been found painful. The effects of the sublimate are said to be remarkable in chronic cases, which nitrate of silver and boric acid have entirely failed to cure. The author has used the solutions of the sublimate in cases with small or with large perforations, and in both acute and chronic cases, and has cured at least half his cases,—no very great success, after all, in the estimation of your reporter, since the statistics of the dry, antiseptic treatments are far better, being from eighty to ninety per cent. of cures.

The red precipitate of mercury, on account of its insolubility, can be used only in a limited number of cases with advantage. It can be used only as a powder, and in small quantities, in cases of slight purulent secretion, with large perforations in the membrana tympani, since, like alum, it forms hard curds with the mucous secretions. In cases of hypertrophy of the mucous membrane of the tympanic cavity, and in granulations of the membrana tympani (myringitis chronica), the red precipitate, it is claimed by the author, produces far better results than boric acid. It is not to be used except in cases of extensive perforation, and not in combination with the boric acid or dry treatment of the ear.

DILUTE SULPHUROUS ACID IN LIMITED CARIES OF THE FUNDUS OF THE AUDITORY CANAL.

In this connection, a suggestion of Woakes, of London, deserves a notice. In the *Annales des Maladies de l' Oreille*, etc., July, 1884, Dr. Woakes recommends the use of dilute sulphurous acid (B. P. nine per cent.) in cases where limited caries, either in the fundus of the canal, near the membrana tympani, or in the tympanic cavity, can be detected by the use of a probe. It is claimed by this author that when the fundus of an ear which has long been the seat of an obstinate otorrhœa is examined under good illumination, there will usually be found a spot of granulation-tissue seated either upon the membrana tympani or very near its periphery, on the wall of the auditory canal.

Such a granulation on the membrana marks the position of a perforation in it, the proliferating tissue proceeding from the mucous lining of the middle ear. If,

now, such a granulation mass be penetrated to its base with a fine probe, a slight grating sound will be perceived, indicating the presence of exposed bone. This, of course, demonstrates the existence of a limited caries or necrosis on the osseous walls of the drum-cavity. "Reference is not made in this statement to those gross cases of disease of the temporal bone, the nature of which is quite obvious to the casual observer, but rather to occurrences which may complicate, while they directly result from, an ordinary middle-ear catarrh, and which will assuredly not be recognized unless specially sought for in the manner above described."

To combat this condition, sulphurous acid (B. P.) diluted with three or more parts of water, according to the requirements of the case, has been used for the past five years, with general satisfaction. "If, as rarely happens, the external canal resents its presence and shows signs of irritation, the strength of the solution must be lowered, or its use discontinued for a time." The rationale of its action appears to be that when maintained in contact with the carious surface the dilute acid dissolves the earthy salts of the minute spicules of dead bone which project from the carious surface. It also removes the discharge from and disinfects the surface producing the necrotic spicules, and by its stimulating influence induces a healthy action, which rapidly ends in cicatrization.

The application of the dilute sulphurous acid is to be used only when exposed bone is felt in the fundus of the canal by means of a probe. The instillations are to be made warm, thrice daily, and allowed to remain half an hour *in situ*, the patient being in a suitable lying posture. In four or five weeks a cure can generally be effected. Prior removal of granulation-tissue is not necessary, except where its bulk prevents or retards the access of the acid to the underlying caries.

LARGE DOSES OF POTASSIUM OR SODIUM IODIDE IN SUDDEN DEAFNESS OF SUPPOSED SYPHILITIC ORIGIN.

Dr. Albert H. Buck, of New York (*New York Medical Record*, September 6, 1884), offers a series of brief histories of cases as a contribution to the subject of the daily administration, through a period of several days or weeks, of large doses of potassium or sodium iodide for the relief of sudden or rapidly-developed deafness, due apparently to the presence of syphilitic lesions in the labyrinth, or in some part of the auditory nerve outside of this system of cavities, or, finally, in those parts of the tympanum which constitute the movable barriers of separation between this cavity and those of the labyrinth. The chief object of this communication is to throw a little light, if possible, upon the prognosis and treatment of what appears to be syphilitic disease of the labyrinth, and to induce others to communicate their experience in the treatment of such cases. All cases of syphilitic diseases of the middle ear are excluded from consideration. Those cases are chosen for study in which the profoundness of the deafness and the rapid manner in which it develops seem characteristic of syphilitic disease of the auditory nerve, rather than of catarrhal lesions in the tympanum.

Dr. Buck regards those conditions of total deafness which have been attributed to syphilitic disease of the labyrinth, and which have been reported by some observers as entirely cured in a few weeks by specific treatment, as probably not due to lesions in the labyrinth, as "it is not perfectly clear that middle-ear lesions may not have contributed materially to the deafness."

Accounts of five cases are then given, in the first of which, a man, 38 years old, ordinary anti-syphilitic treatment was carried out without any improvement in the hearing. In the second case, a man, 27 years old, the anti-syphilitic treatment at first consisted in daily inunctions of a five-per cent. preparation of Squibb's oleate of mercury, and the internal administration of the iodide of potassium three times daily, in increasing doses. The iodide of potassium was continued for six months, until the patient took five hundred and twenty-five grains daily. Profound constitutional effects were thus produced, but no improvement in hearing.

The drug was administered in all the cases according to the suggestion of Dr. F. R. Sturgis, of New York, in a saturated solution, so that one minim equalled one grain.

In the third case, a man, 45 years old, in the course of three months the administration of the drug was carried to three hundred and fifteen grains daily, and kept up two weeks, *without any unpleasant effects*, but also without any appreciable improve-

ment in the condition of the hearing. The treatment was then abandoned.

In a fourth case, a man, 52 years old, in whom, however, the syphilitic origin of the deafness was not entirely clear to Dr. Buck's mind, thirty grains of the iodide of sodium was given daily at first, and then increased, until in the course of a month for six days the patient took three hundred and sixty grains daily.

The hearing, however, was not restored in the slightest degree, and the tinnitus was not appreciably diminished. Treatment was then abandoned.

In the fifth case, a man, 40 years old, two days before seen by Dr. Buck, there had been decided vertigo, nausea, and double tinnitus; in a short time vomiting of mucus and bile at intervals for several hours. It was then discovered by the patient that he had lost the hearing of both ears. Examination of the ears revealed no lesions other than those of chronic catarrhal inflammation of both tympana. As the patient had been under Dr. Buck's care ten years before for syphilitic sore throat and with subacute otitis media, the mixed treatment just described was tried in this case. In four days the vertigo had nearly ceased, and the patient could hear a loud voice. In the course of a month it was learned that little or no improvement had taken place in his hearing, and that the tinnitus was still marked. Up to this time he had been able to take only ninety grains of iodide of potassium daily. The iodide of sodium could not be taken, as it nauseated him. In the course of a week the quantity of iodide of potassium was increased to one hundred and eighty grains, but this was soon abandoned, as the patient's stomach rebelled. Finally, this man took two hundred and seventy grains daily, but in a week it was abandoned, as it seemed to do him more harm than good. It certainly produced little or no effect upon the hearing, as he had to be communicated with by writing.

In conclusion, Dr. Buck says, "The treatment failed to accomplish anything worthy the name of improvement in all five instances, and yet, as has been observed in the cases reported by Dr. Roosa and Dr. Webster, essentially the same treatment may accomplish strikingly favorable results. . . . The only plausible explanation that I can give of the infrequency of our successes is this: A syphilitic gumma in the labyrinth, and especially in the cochlea, will rarely fail to produce damage from which recovery is scarcely possible. Treatment may lead to the absorption of the gumma, but it cannot readjust and render functionally useful those delicate and carefully-adjusted organs which the tumor has disarranged, and perhaps even destroyed. . . . In the cases reported by Drs. Roosa and Webster we may assume that the pressure had gone only so far as to suspend for a time the vibratory power of the cochlear structures, but had not destroyed or even seriously injured them. It is also possible that the gumma may occupy a position in the vicinity of the oval window and foot-plate of the stirrup, or in that of the secondary tympanic membrane (round window). A lesion so situated would be competent to annul the power of hearing, but it would not necessarily destroy it," which is essentially the view of the subject expressed by your reporter in No. 414 of this journal (October 6, 1883).

TRANSLATIONS.

THE FUNCTIONAL INDEPENDENCE OF THE TWO CEREBRAL HEMISPHERES—ITS DEMONSTRATION BY EXPERIMENTAL HYPNOTISM.—In a recent Paris thesis M. Berillon gives the results of researches into the physiological, independent activity of function possessed by the cerebral hemispheres, and quotes in confirmation of this view evidence from anatomy, physiology, embryogeny, cerebral thermometry, comparative pathology, human pathology, mental pathology, psychological observation, and more directly from experimental hypnotism. By following this path of investigation, which Charcot and Dumontpallier have enlightened by so much patient and laborious investigation, M. Berillon believes that he has succeeded in demonstrating in a manner almost irrefutable the duality of the cerebrum and the functional independence of the two cerebral hemispheres.

From experiments upon patients at La Pitié it was shown that hypnotism (1) may be localized in one hemisphere; (2) may be exercised simultaneously in the two hemispheres, although in different degree. Without stopping to consider the means of inducing unilateral or bilateral

cerebral hypnosis (further than to indicate that the condition was established by excluding one of the eyes by means of a bandage, and by thus acting upon only one retina or upon both in succession), we will give the conclusions contained in a *résumé* of the investigations of the author. The work is in two parts.

"In the first part are grouped methodically a large number of facts taken from divers branches of biological science, which appear susceptible of contributing proof to the theory of the functional independence of the two cerebral hemispheres. These facts are already known, and result equally from experiments and observation upon animals, and observation upon man.

"In the second part of the work there appear, on the contrary, a great number of facts entirely new, which in this case offer the special interest of being the result of experimentation directly upon man. These experiments are due to a mode of physiological investigation which is still seldom applied,—experimental hypnotism. By this it can be proved that in the human subject, by pursuing certain methods and at the will of the experimenter, we can

"(1) Suppress the psychic motor and sensory activity of one cerebral hemisphere (unilateral cerebral hypnotism).

"(2) Give to each hemisphere a different degree of activity (bilateral cerebral hypnotism, of different degree for each side).

"(3) The two hemispheres having equal activity, to create for each of them and simultaneously the manifestations of hypnotism of different nature and character (bilateral cerebral hypnotism of similar degree, but with different manifestations for each side)."

Referring to the latter form, the author explains this curious condition as follows: "That is to say, that the same individual can, in a hypnotic state, represent by each of his hemispheres a *distinct being* endowed with an individuality of its own. In such a condition, each hemisphere being complete by itself (although its action may be generally, from a stand-point of motility, limited to a single side of the body), and possessing within the limits of its attributes a special activity, one might say that man, whether from a psychic, sensory, or motor point of view, is really double; *in short, that he possesses two organs of ideation,—two brains.*

It would be impossible, the author says, in conclusion, to demonstrate experimentally upon man, in a more striking or precise manner, the *cerebral duality* and the functional independence of the two cerebral hemispheres, than he has done by this novel method of experimentation.—*La France Médicale.*

ASEPTOL.—A phenol compound, termed orthoxyphenylsulphurous acid, has been recently introduced into therapeutics under the name of "aseptol," this title having been given to it on account of its remarkable germicide qualities, which excel those of carbolic and salicylic acids. Aseptol is an amber-colored fluid, of a density 1400; it has a slight odor, but is more pleasant to the smell and is less poisonous than carbolic acid. Last November Drs. Leroy and Van den Shrieck, of Antwerp, studied the therapeutic applications of aseptol, and reported most satisfactory results as an antiseptic. It has the following advantages over antiseptics in common use:

1. It is very soluble in water.
2. It is very slightly caustic.
3. It is free from irritative qualities, and may be applied for a long time to the skin, the eyes, the bladder, etc.
4. Finally, its slight toxicity, which permits its use internally in considerable doses, and also the application of concentrated solutions in diphtheritic pharyngitis and laryngitis.—*La France Médicale.*

HYDROCHLORATE OF COCOAINE, THE NEW LOCAL ANÆSTHETIC.—Upon the recommendation of Dr. Koller, of Vienna, the muriate of cocoaine has been used with surprising results as a local anæsthetic in ophthalmic surgery. Dr. Noyes having written a letter containing an account of the Heidelberg Ophthalmological Congress to the *Medical Record*, in which he described its almost magical effect, it has been tried by a number of New York surgeons. Drs. Knapp, Agnew, More, and Minor have performed a number of operations with its aid, using a two-per-cent solution of the drug (Merck's). Two drops at a time instilled into the eye to be operated upon for squint, for cataract, or for enucleation, repeated every five minutes, brought about such insensibility of the eye that no other anæsthetic was needed, and even in children painful operations were done without any suffering whatever. One of the experimenters declares that, "should cocoaine in the hands of others meet with the same success that I have attained, it will mark an era in ophthalmology unsurpassed by any in modern times. Its use in other branches of medicine and surgery may be almost as important as in ophthalmology."

PHILADELPHIA
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EDITORIAL.

STATE EXAMINING BOARDS.

HE who has sown seed amidst derision because of its alleged want of vitality and the apparent poorness of the soil may well watch with pleasurable pride and self-congratulation the growing grain as it ripens for the harvest. It is thus we note that the State Medical Society, the Philadelphia County Medical Society, and the Philadelphia Medico-Legal Society have appointed committees to secure the passage of a law providing that no person shall, after its enactment, enter the practice of medicine in Pennsylvania save only by passing a medical examination before a State Board of Examiners. A valuable essay, in advocacy of this view, we gladly publish upon another page.

Many years since, we stated in these pages our earnest opinion that such a law as this should be adopted; and we see no necessity for here reiterating the reasons then assigned. We believe that the medical profession of the State are now persuaded that such a measure is needed for their own protection, as well as for securing the people against the ravages of uneducated practitioners. The discussion is no longer, Ought this thing to be done? but, How shall it be accomplished?

If the three committees are in thorough earnest, they can secure the passage of the law at the next session of the Legislature.

From whence cometh the opposition? Only is it to be expected from the medical schools; and these can hardly afford to act openly against the proposed law. Institutions with graded courses and strict examinations will naturally welcome such law, as making plain their superiority, and other schools can scarcely proclaim with advantage their belief in their own insufficiency and weakness.

It is all-important that the law be carefully drafted, and it is plain, to our thinking, that certain principles should be involved in it. In the first place, there should be but one board in the State,—at least one for each "school" of medicine: otherwise there could not well be persistent uniformity of action: every board would be thinking of itself in comparison with another, and be very prone to guide its examinations, not by a simple sense of right, but, at least in part, by what its neighbor was doing. Moreover, one central board would be more dominated by a sense of responsibility, and more free from local feelings, than would local committees. It is no great hardship for the man who desires to enter practice to travel even the whole length of the State in order to obtain this privilege. Moreover, if the sessions were held in Philadelphia, as most of the candidates graduate in this city, they would be here ready for examination in the spring.

Another principle which should be clearly recognized is that the examinations should, entirely or in great part, be matters of record, and therefore be in writing, the examination-papers to be preserved for at least ten years, and the written questions to be published at the close of the examination. As some rejected candidates might not want their blunders preserved, they should have the right to withdraw their papers after signing a written acquiescence in the justness of their rejection.

A second important principle is the recognition of the ugly fact that there are several schools of therapeutics,—or schools of real and imaginary therapeutics, if exactly accurate phraseology be preferred. The difficulty can readily be overcome in one of several ways: (1) by having two examiners in therapeutics, and the candidate not to state which of them he should

choose until he had passed the rest of the board; (2) by having no examiner in therapeutics; (3) by having various examining boards, one for each so-called sect in medicine. According to our present thought, the latter would be the best plan: there would be no mixing of the regular and irregular professions; there would be no possibility of complaints by candidates of prejudices against them on the part of examiners other than the therapeutists, because of the candidates' therapeutic predilections; there would be no jealousy and no struggle between sects concerning positions upon the board other than that of the therapeutist. We believe it would be best for all concerned to allow every *incorporated* State Medical Society to give a list of names to the Governor of the State, out of which he should appoint an examining board, who should license to practise in accordance with the rules of said society. The objection, of course, is that the inferior sects of practitioners would appoint inferior boards and open the doors wide to applicants. If, however, the examination-papers were accessible to every one, this evil would not, we think, be uncurbed, and, at any rate, the regular profession might maintain its own dignity. The State Board of Health, when created, or some other body, might have the duty laid upon it of reporting on the examination-papers at intervals.

A LESSON FROM THE ELECTRICAL EXHIBITION.

THE Electrical Exhibition of the Franklin Institute of this city has closed, after a very successful run,—as the dramatic critic would say,—and the various committees of judges have about finished their tasks, though, in some cases, still very actively at work. The display of medical electrical apparatus was distinctly inferior to what might have been expected, several of the largest manufacturing houses in America not being represented. But there are a few conclusions to be drawn or facts stated that seem worthy of note here. The old, well-known story of the powerful current setting towards quackery in all things electrical was most marked. There were but two, or possibly three, honest electro-therapeutical exhibitions in the whole list. The medical profession is in part to blame for this, because many physicians use batteries sold under false claims, and even a goodly number of practitioners do not know that such claims are false.

Every battery which is offered, as many of them are, as giving a galvanic current from the primary faradic coil, is fraudulent in at least this claim. The faradic current is induced only at the making and the breaking of the circuit. When the circuit is closed, the galvanic current, of course, passes through the closed circuit and does not enter the body; when the circuit is opened, of course the galvanic current cannot pass anywhere, because there can be no current, it being the cessation (*i.e.*, breaking) of the current which makes the induction. It is plain that a force cannot be existent and non-existent at the same time, any more than can a material substance. If the galvanic current exists and is not interrupted or broken, there can be no induction.

Again, faradic batteries which profess to get divers mysteriously-endowed currents by using a multiplicity of coils made of wires of different sizes or of different metals, methods of winding, etc., are fraudulent in their claims. There is but one kind of galvanism, and currents can only vary in strength and electro-motive force. Alongside of the highly scientific batteries, dynamos, and what not of the exhibition were medical batteries asserting practically that there is such a thing as a copper electricity, an iron electricity, a silver electricity, and so on. All of which reminds one of certain parts of London, in which the lowest slums abut against the fine palaces of the money-kings.

One word more concerning faradic batteries is all that is here necessary. No physician should buy a faradic battery which is not provided with a slow rheotome or current-interruptor, and this ought to be so constructed that it can be adjusted to run at the rate of sixty per minute, or with a swiftness approximate to the slowest beat of the rapid rheotome. On only two faradic batteries at the Exhibition were such rheotomes.

Most of the portable galvanic or chemical batteries which were exhibited are modifications of the old Stohrer battery, and are open to very serious objections. The liquid is a solution of the bichromate of potassium in diluted sulphuric acid, and is excessively corrosive. The connections are very close to the liquid, and therefore very prone to become corroded. The closeness of the cells is such that the joints are exceedingly apt to get loose with use and to allow of leakage. When it is further remembered that this form of cell is one of the most rapidly polarized and exhausted of any known, it can be well seen that a portable galvanic battery for practical use is, so far as the exhibits alluded to are concerned, still a desideratum.

There were two portable galvanic batteries shown at the Exhibition which are not widely known, but which are the most promising forms we have ever seen. One of these, exhibited by Mr. Otto Flemming, has modified Leclanché elements. The electro-motive force of these elements is not nearly so good as is that of a freshly-charged bichromate battery, but in permanence and regularity of action and in freedom from corrosive properties they are almost unrivalled. With a change in the mechanical arrangement, so that the cells could be more permanently closed, this battery might prove to be thoroughly adapted to our wants.

Another form of galvanic battery having remarkable electro-motive force, and therefore especially adapted to medical use, is that invented by Mr. Partz. The plates in this battery are of carbon and zinc, as in the ordinary sulpho-bichromate-of-potash cell, but the fluid is a solution of chloride of zinc and bichromate of ammonium. The inventor claims that this form of element has an electro-motive force nearly equal to that of a Grenet cell, whilst polarization takes place so slowly as to be practically non-existent for medical purposes, and exhaustion of the fluid is so slight that a battery will do a year of ordinary medical work without replenishing. A very important feature is that there is no "local action" in the battery, and that, consequently, immersion of the plates does not have any effect upon them or the fluid, so long as the circuit is not closed. As a result of this, the cells can be made perfectly tight and at the same time be kept small. There is therefore no danger of leakage during transportation, and the weight of a charged battery of fifteen cells is only fourteen pounds.

Both the portable Leclanché battery of Mr. Flemming and the Partz battery were referred to the committee of judges, for report upon their electro-motive force and upon their "rate of fall,"—*i.e.*, loss of power during use. Until such report is made public we may well suspend judgment, but it does look as though we might expect in one or both of them a solution of the problem how to make a practical portable galvanic battery for medical use.

ONE of the most important duties performed by the International Medical Congress held at Copenhagen was the passage of a resolution creating an International Committee for the Collective Investigation of Disease. Professors Jacobi, of New York, and N. S. Davis, of Chicago, were appointed as representatives in the United States. It is to be hoped that the general profession will aid the committee, in order that satisfactory progress may be shown at the meeting of the International Congress at Washington.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE winter session of 1884–85 has now commenced, and at many of the metropolitan schools the old custom is observed of giving an address to the students, old and new. Some schools have abandoned the address in favor of a conversazione; but which really impresses the student most is a matter on which opinions may and legitimately can differ. When the reasons why a man is chosen or adopted as one of the lecturing staff of a medical school are known and understood, and his power of exposition has a known value, then it might be possible to make the worth of the introductory address a matter of calculation. However that may be, the addresses of the present year have not fallen behind their predecessors. That at University College was delivered by Dr. W. R. Gowers, one of the physicians of the hospital, a man who has done good work, and who holds a good position as one likely to uphold the reputation which University College has deservedly won. He first welcomed the new-comers, and then pointed out the wide range of information which is required for a medical man. It is not merely the scope of the examination-questions, entailing some acquaintance with about half the sciences, but the requirements of practice, which touch nearly every branch of science. "The life-work of the medical man," he said, "was the prevention, cure, and alleviation of the diseases of man. Whatever else man is, he is part of the material world, and is, moreover, the highest and most complete phenomenon yet discovered, or likely to be discovered,—that in which the interactions of force attain the highest elaboration known to us. The most complete form of matter, the most delicate adjustment of force, is presented by a nerve-cell of the brain. Of the slow, never-resting tide of creature-development, sweeping on through ages far behind us, ebbing and flowing, and yet, with sure advance, moulding into new forms and higher phases the mysterious elements on which it works, the ultimate result, the highest issue, is the subject of your study." This was a tolerably stiff bit of evolution for the freshmen; but, then, breadth of view and untrammelled thought are known to obtain at the college in Gower Street. He continued, "But elevation entails instability. The exquisite capacities of organic bodies are obtained by a delicate adjustment of restrained energy, ever striving to gain some lower and more stable state, held in an equilibrium that is destroyed by the slightest change, and is, indeed, in constant process of destruction and renewal. Hence, by altered constitution and function, a living organism responds to every variation in the conditions outside it,—to every change in temperature, mechanical forces, chemical constitution, of its surroundings, and doubtless, though more obscurely, to every alteration in electrical and, perhaps, magnetic states. To every change in earth and air the human frame is sensitive. Each motion of our rolling world, each wave of light from the far-off sun, each wind that bears to us the warmth of tropic seas or cold of mountain snows, determines some change in us. An alteration of the soil on which we live may modify completely the processes of life." Consequently the medical man, in order to cope successfully with the disturbances within the organism set up by such a myriad of causes, must have far-reaching, wide, almost all-embracing information to deal with the causes which are producing the results; and a tolerably trying outlook for the juvenile mental powers he sketched. Though, of course, what he said is quite true. And those youngsters, when they become gray-haired and skilled practitioners, will have learned the multitude of varied causes which lead to a yellow-furred tongue, telling of disorder of the liver, from causes varying from the east wind to a business complication entailing worry. But in the mean time we hope that they will learn to give a dose of calomel and a few grains of jalap, when such evidences of liver-disturbance are present, until they can deal with the causal relations of it. When they can calculate these, then probably they can do away with the necessity for the mercurial cholagogue and purgative.

Having, then, pointed out the object of the various subjects of study required in a medical curriculum, he passed on to a very important matter (on which, indeed, an address on the termination of a college career would not be out of place), and that was the importance of entering into the feelings and thoughts of sick persons, so as to deal with them with proper consideration. To enter fully and deeply into suffering with the sympathy that is not only intelligent, but "with suffering," he admitted was "impossible. A doctor's work would then be simply beyond human endurance. To him, as to no other, the darkest side of human nature is ever open; in his ears the deep undertone of sadness rings through every chord and melody of life,—now in the wail of pure distress, now in the discords of passion, now rising into the sweet but still, sad music of patient resignation and of self-sacrificing love. Well it is for the world that it is possible to understand without enduring, or the helpers would be few. As it is, our lives are often saddened by the suffering we cannot but share. No statement more untrue was ever uttered than that familiarity with suffering destroys the capacity for sympathy in medical men. It is one of the many statements that are made

regarding the members of the medical profession—misconceptions of their feelings and their motives—which could not be made if the character of the profession as a whole and the value of its work were duly appreciated." Here Dr. Gowers spoke up for a much maligned profession in a manner becoming his position. After that he went into some detail as to the actual amount of good done by the profession in a single year. He pointed out how active was the part taken by the profession in the prevention of disease, and stated that no other members of the community strove so hard to deprive themselves of at least half their living. How far, by our present capacity to rear delicate children, the profession was providing itself with work in the future was a matter lightly and cautiously touched upon. He then had a few words to say about the rewards of our profession, which, he pointed out, were other than pecuniary; for of the last it would reap but little. Nor did he say much of honors granted to it.

At St. Thomas's Hospital the address was given by Sir Risdon Bennett, consulting physician to the institution and an ex-president of the College of Physicians. He also took the line of the wide information required by a medical practitioner, including psychology: "It needs but a slight acquaintance with the practice of medicine to learn how greatly the equilibrium of health depends on the due regulation of psychical as well as physical force." Indeed, he thought psychology belonged quite as much to medicine as to those who devoted themselves to psychiatrics. Disease in its manifestations was modified in several ways by mental states. He remarked that "At the bedside the practitioner has to do with something that cannot be studied in the dissecting-room,"—which was certainly true; and he might have stated, equally truthfully, nor in the pathological room either. It will be long ere the microscope can demonstrate in a brain-cell a life of self-devotion to others, or even the effects of an overmastering ambition. Then he referred to the wide domain of therapeutics, and showed how hygiene, diet, and regimen were a part thereof. Indeed, he had a word to say in favor of an acquaintance with cookery. He said, also, with the wisdom born of long experience, "Whatever the genius of some, or the special opportunities of others, may enable them to expect, it is by close observation of nature—which all may and are bound to cultivate—that most of us can hope to attain what should be the desire of all;" and then concluded with some quotations from Sir Thomas Browne, which apply as well now as when first uttered.

At Westminster, Dr. A. Hughes Bennett, the respected son of an illustrious sire, discussed "Medicine as a Profession." He pointed out that the aim and object of life, from a worldly point of view, is to extract the largest possible amount of felicity from existence; that with many the accumulation of wealth loomed largely. Yet, while this was undoubtedly a material affair, still happiness and wealth were not synonymous. In order to get a living a man must adopt an occupation; for educated persons not only is a living requisite, but also some intellectual gratification, "the successful combination of which two elements is undoubtedly necessary for the attainment of happiness." He then went on, "The well-being of the community in great part depends upon the honor and moral rectitude of our profession, whose powers of doing good and evil are so unlimited." After which he inquired how the public had encouraged and appreciated those upon whose shoulders so much rested, and then went on to show how neither from a political, a social, nor a commercial aspect was medicine exalted, as compared to other callings in life. The doctor gets few honors from the state; his social position is not what it ought to be as one of the learned professions, and compared to the law and the church; and he continued, "There is no item in the expenditure of a household more grudgingly bestowed, more liable to be questioned, or more tardily settled than the doctor's bill." Now, if the editor of the *British Medical Journal* reads his journal, and remembers what he said some years ago, when the writer said something—the truth of which has been generally admitted—about the position of the profession, and compares it with these inaugural utterances, he ought to be a sadder and a wiser man now than he was then; though it is quite possible that such is not the case.

Having eased his mind as to the less fair side of medicine, the lecturer proceeded to paint its attractions. If the state paid it little attention, its freedom was all the greater; its charms were its own. If medicine had no great social status, it at least did not debar its members from high social position. Then he said something very true, and put it very well: "According to the respect with which he treats his own calling, and the courtesy and forbearance he exercises towards his colleagues, so will he raise his profession in the eyes of the world. Just as his relations with the public are dignified and honorable, so will he elevate himself above the adventurer and charlatan." And in this he struck a very weak spot in our professional armor. Then he went on to talk of the pleasure of knowledge, or, rather, that it brings with it. "The acquisition of knowledge of all kinds brings with it its own reward," he quoted. But it is not in student-life that the bulk of men feel this. It is when the hair begins to grow thin on the vertex or to turn gray that this aspect of knowledge dawns upon most of us. With the neophyte it is the examination-table on which he fixes his steady gaze. The lecturer felt this, and expressed himself

so in speaking of medical education: "This should aim at something higher than to prepare the pupil for the ordeal of the examiner or to obtain for him a legal qualification to practise. The real purpose is to initiate the student into the fundamental principles of medicine as a science and an art, to train his mind into habits of accurate observation, to cultivate a love of study, and to develop a taste for scientific pursuits." One wonders whether at this point Dr. Bennett was not indulging in a little sarcasm, as his father often did.

At St. George's Hospital, Dr. Champneys, the Assistant Obstetric Physician, gave the address, which dealt with "Midwifery as a Moral Training." He analyzed the motives which led men to enter the medical profession. Among them are, "first, the hope of being stamped or marked by the profession, and, secondly, the hope of leaving their stamp or mark upon it." He thought it spoke well for medicine that "our ranks are constantly swelling, and swelling with men whose education and social status appear to improve every year, in spite of the fact that its members are comparatively poor." Then he made a quotation: "There are three things which a poor man cannot afford to keep,—pride, a horse, and a conscience. All undoubtedly involve an outlay, or, in other words, a loss of money; but the first and third must be kept at all price, and the second acquired when necessary." He was glad that midwifery now had a recognized position, and that "it is now practically impossible to gain possession of any respectable diploma without the acquisition of a tolerable knowledge of midwifery and the diseases of women." He pointed out that in practice such knowledge, "almost more than any other," stands the practitioner in good stead, especially in the early part of his career; and, though neither have for years come specially under the writer's notice (except so far as disturbances connected with their sex are inseparable from women's troubles, whatever they ail—and that is almost always), he can fully indorse the lecturer's view. Women are grateful for knowledge which applies specially to themselves, and, what is more, their gratitude is rarely a purely negative matter with them. After which he pointed out how association with woman in her hour of need brought out the better and higher qualities of a man, and spoke truth therein. "To be a good practitioner," he remarked, "you must also have 'clean hands' (antiseptically as well as ethically) and a pure heart." He thought that watching nature manage her own affairs was a good broad rule: the more intimately a man knew her ways, the sooner he would be able to detect the first beginnings of mischief. The whole study of pregnancy and parturition he thought most excellent mental and moral training.

At the Middlesex Hospital, Dr. Finlay, Senior Assistant Physician and Lecturer on Forensic Medicine, delivered the address on the subject of "Preventive Medicine." He bewailed the fate of the unlucky Medical Bill, of which his predecessor, the year before, had spoken hopefully. "The daylight which had been let in by it upon some of the license-granting bodies had not been fruitless," he thought. He then dived into the subject proper of his discourse. We had made, he said, steady average progress, in the matter of the percentage of deaths from zymotic disease, since 1875, when the act pertaining to sanitation came into work. Sanitary medicine had made good its claims to public attention. Still, there was much left to be done which had in it promise of great results.

At Queen's College, Birmingham, the address was given by Dr. James Sawyer, Senior Physician to the Queen's Hospital, one of our best provincial physicians. He claimed that theirs was one of the best schools of medicine, not only in the provinces, but "in this or any other country." Some of his passages are well worthy of quotation. "Examination is the dominant 'note' of our current medical instruction. Two or three generations ago the leading principle of medical education was 'imitation.' Now the student sets before him examinations he has to pass; then the apprentice had a master to imitate. Now our teaching is professional, and to a class; then it was more personal, and to an individual. There is much that is good, doubtless, in our present system of medical education; but I am afraid we have scarcely preserved all that was good in the system we have set aside. I dare say we have been gaining in professional knowledge. Have we not been losing somewhat in professional wisdom? We have been growing in scientific precision. Have we not sometimes been loosening, and are we not in danger of losing, some of our best traditions?" There is a right good ring about that utterance! Then he pointed out that they came to college to gain knowledge. Hear what he has to say about knowledge: "Now, I am afraid many of you are apt to imagine—as most people do when they begin preparation for a particular career in practical business or professional life—that all you want now, and that all you need seek, as students, is knowledge. You have heard very often that knowledge is power, and you are prone to think that if you have knowledge all things else will be added unto you. But surely this is not so. Knowledge is not power, but only its material. Knowledge is only power when wisdom points its employment. Even now, and here, when and whither you have come to seek and find knowledge, you must seek and find wisdom too, if you would grow in skill and grace which the life you have chosen requires of you." Wisdom is refined

knowledge, which has a practical value, he continued. "When you have begun to apply knowledge in thought and action," he said, "to the best ends and true purposes of life, you have begun to be wise." He concluded by advising the study of the lives of those who have achieved success, as well as matter for the examination-table: "so you will learn how to prepare for professional life as well as for professional diplomas." And all right-thinking persons, who have the honor of medicine at heart, must agree with Dr. Sawyer, who has evidently "learned wisdom" as well as "acquired knowledge."

J. Milner Fothergill.

THE KENTUCKY STATE SANITARY COUNCIL.

THE interest in the proceedings of the Kentucky State Sanitary Council, both public and professional, grows with every semi-annual meeting. At Elizabethtown, that beautiful little city in the centre of Hardin County, the session of which I shall speak was opened on the evening of Wednesday, October 1.

As all such meetings go, there was, of course, the usual address of welcome by the orator of the place, which in this instance was delivered by the Hon. T. A. Robertson, Representative of the district in which the Council was held. The usual response to this was made by Mr. George Baber, of Louisville, President of the Council, and in his remarks he took occasion to speak nearly as follows:

"The Kentucky State Sanitary Council is a meeting of the citizens of an appointed place, together with those physicians of the State who, as public-spirited citizens, have an interest in the public health, to discuss ways and means to avoid the outbreak of contagious and infectious diseases, and as far as possible, when once established, to control their spread. It is a part of the object of such meetings also to awaken a keener interest generally upon all matters relating to the general health. As such, every intelligent citizen, regardless of avocation, of politics, of profession or standing, can and should take a deep interest in the subject and in the meeting. This movement, at first ridiculed by the secular press in the State, has come to receive not only the respect, but in some instances the support, of the press, and it has the interest of the best people enlisted everywhere."

At the close of Mr. Baber's remarks, the regular proceedings of the Council were begun. The first subject to engage the attention of the Council was "A Healthy Home," by Dr. Dudley S. Reynolds, of Louisville. He said in substance:

"We have so many things that tend to revert the attention to the old fireside and the old home that I felt especially honored upon being notified that I was expected to address this audience this evening upon such a popular subject.

"Man's first care in primeval times was to protect himself against extremes of temperature and the vicissitudes of climate, while at the same time he secured the materials for the maintenance of his life. Having secured these, necessity suggested an opening in his rude hut to let in the light and air to dispel the foul emanations of close confinement. Beginning with these simple and elementary ideas, the improvements in his surroundings and habitation were added one by one until the present time, so that now the consideration of the subject of a healthy home naturally divides itself into a discussion not alone of those conditions necessary to sustain life and to preserve health directly, but indirectly as well, by relating to the common dangers of neglect, of unfavorable location, or unsuitable climate, or limited means.

"The consideration of the factors of light and air alone is one of vast importance. They are factors of great importance, and factors too, unfortunately, much neglected in this day of crowded cities. To the air alone and what it contains we must look for the origin of all those diseases which we recognize as distinctly malarial. The consideration of the water-supply is one of equal import, as pertaining more directly to the nourishment of the body, and one of vast importance too, when we recognize it as the medium through which some of the most dangerous and terrible and devastating diseases find entrance to the human organism. We drink the cholera and the typhoid fever." The questions of food, clothing, sleep, and ventilation, together with cleanliness and drainage, called for separate attention, and, in conclusion, the subject of consumption, as due to improper attention to these subjects and as the result of neglect in securing wholesome surroundings, was discussed.

In the discussion which followed Dr. Reynolds's address, Dr. McCormack, of Bowling Green, said that an excellent authority had written that the style and architecture of the school-houses and churches of the people marked their advancement in civilization. He thought it might better be said that the home-life of a people was the true test of their advancement. This is a broad question. Lately the State Board of Health had been engaged in making a sanitary survey of Kentucky, inquiring on a large scale into the home-life and habits of the people. The result is not flattering to our vanity: carelessness in regard to the location, construction, and ventilation of our houses, and in regard to the disposal of house-refuse and kitchen-slops, had been reported from all sides, and the results of these neglects—typhoid and other fevers, diphtheria and other filth-diseases—

are widely prevalent. He pointed out the absence of all systematic attempts at ventilation of dwelling-houses, and also the relation of impure air to scrofula and consumption, as another evidence of home-neglect. This survey showed that only about one-third of the people of this State had been vaccinated. Thousands of dollars were paid from the county treasuries in Kentucky to treat and stamp out smallpox, which properly applied in vaccination would entirely prevent this disease. Cleanliness and carefulness in every home would make Kentucky what it should be,—the healthiest and greatest of the States.

Dr. Breyfogle thought the address of Dr. Reynolds was timely and most excellent, but that it did not go far enough into the subject of a healthy home; that the suggestions contained in the address applied more especially to people of the higher classes, those able to construct and own their own homes; that more attention should be paid to those poorer classes who are under the influence of landlords who care less for the physical than the financial condition of the tenants. We should teach them that these are not the only requirements for a healthy home; teach them that they swallow disease as often in stale vegetables, impure milk, and diseased meats, as from the emanations from garbage and cess-pools; teach them to look into their culinary department oftener; and then if the poor laborer, who goes to his work early, leaving his wife with the cares of a large family, should be unable to fully conform to the modern sanitary regulations in the removal of offal from his premises, they can at least remove some of the predisposing causes of an unhealthy home. Again, some reference should be made, in treating of a healthy home, to the moral influences, which contribute so often to debility, nervous prostration, and insomnia. In this we often find the secret germ which undermines the constitution and prepares the field for reception of the infinitesimal germs so learnedly discussed by my predecessors.

The reading of two papers, one upon the "Injurious Effects of Alcoholic Beverages," and another on "Alcoholic Liquors in their Relations to Health Laws and Regulations," created considerable discussion on Thursday morning.

Dr. Hugh D. Rodman, of New Haven, Kentucky, in the first drew attention to the effects of alcohol, first upon the separate organs of the individual physically, and then morally and mentally upon the man and those dependent upon the soundness and capability of his body for service for the improvement of their surroundings, and in this indirect manner their health. More particularly, however, it was to the effect upon the brain and nervous system of the man that the remarks of Dr. Rodman applied. He showed that a form of insanity, hopeless, irremediable, and perpetual, to which is usually, fortunately, a speedily fatal termination, is one of the common effects of the habitual use of alcohol in one or other of its forms of drink presented to the public; so common, in fact, that, out of one thousand insane patients coming under the observation of Dr. Morel, one of the authorities on the subject, two hundred were deranged through the action of alcoholic liquor. This proportion, in fact, is increasing.

In his report of 1877, Dr. Edgar Sheppard, who has charge of the male patients in the asylum of Colney Hatch, speaks as follows:

"A minute study of the admissions of this year clearly establishes the fact that twenty-eight per cent. of them ought to be ascribed to the excessive use of alcohol."

In the other paper, by Dr. P. C. Sutphin, of Canmer, the subject was treated from a different stand-point, and he raised the question of the necessity of legal enaction to enforce prohibition as a sanitary measure. He declared it useless to insist upon the removal of a closed sewer as a health-precaution, while the saloon and dram-shop, more powerful factors in the destruction of the powers and energies and health and welfare of the supporting elements of the race, were allowed to stand a monument of the cowardice and cupidity of all who claim to have at heart an interest in the health and well-being of Kentucky citizens. Drinkers of alcoholic stimulants, said the reader of the paper, are always the first to succumb to epidemic diseases such as yellow fever and cholera. In Glasgow, Scotland, in 1832, during the epidemic of cholera then prevailing, only nineteen per cent. of the temperate attacked perished, while ninety-one per cent. of the intemperate fell victims to the disease. In the same year at Montreal, of one thousand persons who died there of the disease, only two were teetotalers. Said one writer, "The disease has searched out the haunt of the drunkard, and has seldom left it without bearing off its victim. In New York city, of two hundred and four cases, only six were temperate men, and all of these recovered, while one hundred and twenty-two of the others died." The general drift of this paper might perhaps be well conveyed by the following paragraph:

"It may be said, however, that the Health Board has no power to remove the dram-shop. This may be true so far as the present is concerned, but that this power might be made a matter of the future, if so desired, perhaps admits of but little doubt."

The means by which this could be accomplished was entered upon by the writer of the paper, and afterwards discussed by the members present. The general conclusion of all the remarks and ideas expressed was that three factors might be brought to exercise an influence in this direction, a potent one of which would be by the introduction of the

subject into the common schools, in this way moulding and shaping the sentiments of the generation growing up; another, by enlisting the sympathies of the ministry in the subject, and still further by demanding of legislators those rights which belong to a majority of the people.

Dr. J. N. McCormack, of Bowling Green, read an interesting paper on the "Location and Construction of School-Houses." He was followed by Dr. C. Z. Aud, of Cecilian Junction, on "The Sanitary Science displayed in the Construction of Railroad Depots and Stations."

Dr. W. R. Jones read an interesting recital of a smallpox outbreak in Caldwell County, tracing, from the first case imported, the course of it until thirty-seven cases occurred, with a mortality of three, before it was suppressed by isolation, vaccination, and disinfection.

In the afternoon a paper was read by Dr. R. B. Pusey, of Elizabethtown, on the "Prevention of Cholera;" after which an illustrated lecture was given by Prof. J. A. Tanner, of Louisville, on "Food-Adulterations," which was somewhat surprising as showing the extent to which this practice is carried.

At the evening session a paper by Dr. John D. Bengless, of Brooklyn, New York, on "The Disposal of the Dead," was read by the Secretary.

The writer of this paper carefully traced the different methods adopted from the earliest times to the present, and gave the simplest reasons for their adoption, regarding the question in the beginning as one of convenience, and later as a kind of protection from desecration by wild beasts and hateful foes. Thus rock- and cave-burial was practised in rocky countries, where sepultures were formed by nature's hand. On broad alluvial plains the device most naturally suggesting itself under these conditions was to cover the body with earth directly where it fell. Experience soon teaching the people that a slight covering of earth afforded the dead little protection from the ravages either of driving storms or ravenous beasts or inhuman human enemies, a hole was dug beside the body, into which it was rolled and then covered. Hence the modern forms of the grave and the modern practice of earth-burial. Then he traced the reason for originating tree and scaffold disposition of the dead and of aquatic burial from both convenience and necessity under circumstances under which they are practised, and also explained some of the causes of cannibalism:

"The religious beliefs of various peoples have had much to do with their methods of disposal of the dead. The ancient Egyptians believed that, after three thousand years or more spent in varied states and experiences of transmigration, they would return to reinhabit the body. Wherefore they preserved it by a painstaking process of embalmment for rehabitation. They believed also that the viscera were the seat and source of all the debasing appetites and passions, and that in the re-embodied state there would be a complete freedom from every corrupting and defiling influence. Wherefore, before embalming, they eviscerated the bodies, that in the after-life they might be free from all debasing appetites.

"The Hindus, on the other hand, also believing with the Egyptians in the doctrine of metempsychosis, had such an utter abhorrence of the thought of returning to the body once inhabited on earth, that they sought most sedulously its utter destruction in order to avoid the possibility of such return. To this end they burned it to ashes and scattered the ashes upon the winds and waves, that it might not be possible for the particles to find each other and to come again together.

"The belief of a portion of the Shinto sect among the Japanese in the literal resurrection of the body and a new birth leads them to bury it in a large womb-shaped urn, the body being posed in the urn precisely as the unborn infant rests in the womb, the knees being drawn up under the arms and the hands folded over the breast. In order further to facilitate and guarantee beyond all peradventure this new birth, the original umbilical cord which at birth attached the child, and which through all the years of life has been preserved for this purpose, is placed in the urn with the body. So it has been held by some that all entombment was originally intended to be a species of enwombment, in order that, thus placed in 'mother earth,' the dead might rest in hope of a new birth and of a future life.

"Who, and when, and where was the bold man who first proposed the burning of his brother's body and executed his proposition, and what the motives prompting that proposition, we are not informed. Two things concerning him would seem self-evident: he must have been a brave man to make the proposition, and he must have had reasons for it which induced others to assent to it and assist in its execution. We may surmise that the practice originated on the battle-field, where conquered soldiery resorted to the burning of the bodies of their fallen comrades to save them from indignity and mutilation by the conquerors. Thus originating as a tribute of affection to the heroic dead of the battle-field, cremation might readily and speedily attain the distinction which we know it afterwards held among the Greeks and Romans, and even among the Hebrews, of a rite of honor bestowed at first only upon distinguished persons, and ever denied to criminals, outcasts, and to unteethed infants and women dying in uncleanliness. That in its early history cremation had all the sanitary, æsthetic, and economical advantages which

array themselves in its support in modern times and when conducted according to the most approved modern methods, cannot be claimed. On the contrary, cremation by the open pyre, as usually conducted, by reason of the spice-wood and oils, not to speak of sacrificial offerings burned upon and in the pyre, was costly to a degree. Instead of having about it anything to recommend it to the sensibilities of the refined, it was shockingly barbarous in the seething and torturing action of the flames upon the members of the subject, and, despite the lavish expenditure of spices and perfumes, was inexpressibly offensive in its exhalations. And yet, despite its offensiveness and its expensiveness, cremation became and was for centuries the preferred method of disposal of the dead throughout by far the greater part of the then civilized world. That it should have been superseded by earth-burial is sufficiently accounted for not only by reason of its offensiveness and its great cost, but also by the fact that it rapidly denuded of wood the whole face of lands where it was practised, making fuel so expensive that few could afford a respectable funeral-pile, which became, through the Grecian and Roman empires, almost as costly a luxury as is with us the modern funeral.

"The chief agency, however, in bringing about the change was the spread of Christianity, and this for two reasons: (*a*) the founder of this religion having, upon his death, been entombed, according to the prevailing custom of his people at this time, his followers thought to be like him in following him to the grave, which would not have been so objectionable if they had always been careful to get in 'a new tomb hewn out of a rock,' and then to stay there less than three days, as did he. (*b*) The other consideration was the hostility evinced by Christians to all pagan rites and institutions, cremation among the rest, and their anxiety to do and to be anything and everything that would tend to distinguish them from the pagans among whom they dwelt. Wherefore, as fast as men embraced Christianity they abandoned the pagan practice of cremation. With few exceptions, the people of those times chose neither their religion nor their rulers, insomuch that by royal or imperial decree a hitherto 'pagan' nation became 'Christian' in a day, and the practice of cremation, which once prevailed over almost the entire territory of Europe and Western Asia, from India and Scythia on the east, where it is believed to have had its origin, to the Hyperborean Sea upon the west, and from the Grecian Isles to Scandinavia, was abandoned, except in India, and the practice of inhumation became almost universal. The natives of India, however, have, as a rule, ever retained the practice of cremation, and the influence of their example has travelled eastward into Corea and Japan.

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"If one desires to know the relative merits of the two practices, he cannot do better than to compare the sanitary conditions in this respect of the Chinese and the Japanese, or, in India, the condition of Buddhists and Brahmins, who practised the cremation of the dead, with that of the Mussulman population, who practised earth-burial. China, in the region of its cities, for miles around is a vast, hideous, and pestilential burial-ground, while Japan, in the vicinity of its centres of population, is a land of gardens, wherein grow fruits and flowers and all that in the vegetable kingdom can minister to the comfort and happiness of man. The contrast would be yet more marked if the entire population of Japan practised cremation, instead of only a part of it, and especially were that practice in accordance with approved modern methods, instead of being in great part by the open pyre.

"Much as religious prejudices have had to do with determining the methods of disposal of the dead, there is yet no really essential relation existing between cremation and religion; and as enlightened views obtain, people everywhere are learning more and more that the disposal of their dead is a purely sanitary, economical, and æsthetic question, and that religion has to do only with the life that is and with the immortal part of man in the life to come.

"More and more also are we learning that, whether in the grave or in the crematory fire, and whether in an hour or a hundred years, the body must be dissolved into its constituent elements; that this process of resolution is simply one of oxidation, or burning, as more familiarly known to us. In the grave it is 'cremacausis,' as the distinguished Liebig designated it: a slow burning amid festering putrescence. In the rosy glow of the crematorium it is rapid burning in cleanliness and light,—but burning in either case.

"While, however, the conditions and the process cannot affect, as to the body itself, the ultimate result, as to the effects upon surviving friends and neighbors of the deceased, and upon the sanitary conditions of the region round about, the differences of effects are just the difference between health and disease,—the difference between life and death.

"In the language of Sir Henry Thompson, 'No dead body can be put into the ground without poisoning the earth, the air, and the water about and above it.' Within a few hours, or days at most, after death, the decomposing body is pervaded with bacteria, or microbian organisms, which, together with all the offensive gases developed in the process of putrefaction, are struggling with each other in foul *mêlée*, each seeking to escape from its loathsome imprisonment.

"The body, chemists tell us, is more than three-fourths water, much of which in the

process of decomposition percolates through the earth and finds its way into the neighboring water-courses, carrying with it not only the bacteria engendered in the putrefactive process, but the deadly nitrates and nitrites which give to grave-fed waters their peculiarly enticing brilliancy, while the carbonic acid gas, the carburetted and sulphuretted hydrogen, and other noxious gases, together with numberless microbian organisms, find their way out to the surface to exert their baleful influence upon the relatives and friends of the departed who in tender ministry visit the loved one's grave, and those ministering friends carry with them from the cemetery headaches, sore throats, malaria, typhoidal symptoms, diphtheria, scarlet fever, and numerous other ills, contracted they wonder how, or when, or where.

"Every burial-ground is a magazine wherein we store the seeds of disease to which flesh is heir, to come forth thence we think not how or when, to prey upon us when we are least prepared to resist their attacks. In these thousands of acres, among the fairest and most beautiful of all the land, which in the vicinity of our great centres of population we sequestrate from the living and give over to the dead, we are thus storing the germs of every form of zymotic contagion, there to await the most favorable conditions for their most perfect development and for their most efficient and most deadly work.

"In all that has been said it is assumed that earth-burial is as complete and satisfactory as possible. But how seldom is this the case! How frequently, especially in times of epidemics, is it superficial and incomplete, thus affording the disease-germs the most favorable opportunity for development, and so converting our cemeteries into very hot-beds of contagion!

"Such is the heritage which we are laying up for posterity. And when our children and our children's children come for stress of space to build their homes in these old burial-grounds or to convert them into parks to be breathing-places and play-grounds for their children, they will wonder how and why these beautiful elevated situations can be so malarial, and why their systems seem to have no tone and stamina for the resistance of disease. The public buildings, including hospitals, and the public squares of many of our cities occupy the sites of the burial-grounds and potters'-fields of generations gone.

"Hannibal encamped in the old Campo Santo outside the city of Syracuse, and took the marble tombs to build a barricade from which to besiege the city, and after a brief siege Hannibal and his army were carried off by the pestilence which resulted from disturbing the old burial-ground. The unseen arrows of disease, sped from the bows of the dead, not the spears of the living Syracusans, slew and scattered the Carthaginian hosts. So the dead ever avenge themselves upon those who recklessly invade their domain.

"Let us, then, cease to surrender our fairest hill-tops and hill-sides to the dead, for they will convert them into citadels from which to hurl their poisoned arrows into the city of the living, until all shall be together in common burial blent. These fair slopes and summits are needed for the occupancy of the living, and cannot in justice be surrendered to the dead.

"Instead of thrusting our loved ones who have departed this life into the gloomy grave, there to fester in loathsome putrefaction and thence to come forth in all ghastly forms of dreaded disease, let us reverently, decorously, and expeditiously translate them by means of the all-purifying fire into the elements of all new and beauteous life. So shall our fair land become indeed, as it should be, 'the land of the living,' and not 'the valley of the shadow of death.'"

Following the reading of this paper, Prof. L. Eddy, of Danville, read one on the subject of "Sanitation a Religious Duty."

In this paper the sanitary regulations of the early nations of which we have an account in the Bible were referred to. The lecturer said that it is plain that thorough sanitation was a religious duty of the Hebrews.

"We believe that the presence of an atmosphere of filth lessens human powers, certainly shortens life, and may at any time suddenly terminate it. We believe the seeds of some diseases float in the air, that the seeds of others are in drinking-water, and that they enter the system by the help of these agents. We believe that these germs, many of them, can be destroyed. We believe that in a perfect state of physical health the seeds of many diseases cannot gain a foothold in the human system, but that filth is a most powerful agent to so weaken the body that disease-germs can readily affect it. We believe that filth, using the term in its broad sanitary sense, is to-day mowing down the human ranks as Minié-balls mow down the ranks of an army in battle. If this is true, a responsibility rests upon us for the existence of filth around us, and where there is responsibility there is corresponding duty. 'Cleanliness is next to godliness,' and our lives should be lives of warfare against sin in the shape of dirt, so that, conquered though we be at the last, yet, when we lie down in a good old age, there will be no cause for us to utter the lament of the woman immortalized in the 'Housekeeper's Tragedy:'

"'With Grease and with Grime from corner to centre
Forever at war, and forever alert,
No rest for a day, lest the enemy enter,
I spend my whole life in a struggle with dirt.

'Last night in my dreams I was stationed forever
On a bare little isle in the midst of the sea;
My one chance of life was a ceaseless endeavor
To sweep off the waves ere they swept over me.

'Alas! 'twas no dream! Again I behold it!
I yield; I am hopeless my fate to avert!'
She rolled down her sleeves, her apron she folded,
Then lay down and died, and was buried in dirt!"

Following Prof. Eddy, Dr. William Cheatham, of Louisville, read a paper on "Near-sightedness in School-Children, its Dangers and Prevention," after which his remarks were illustrated by illuminated plates in the magic lantern.

After tendering a vote of thanks to the citizens of Elizabethtown by the visiting delegates for the courtesies and hospitalities shown them, the Council adjourned, to meet at Bowling Green in April, 1885.

ALLEN KELCH, M.D.

MEETING OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THE Twelfth Annual Session of the American Public Health Association, held at St. Louis, Missouri, October 14 to 17, was one of the most successful ever held. The attendance was as full as usual, but the number of the papers presented was larger than ever before in the history of the organization. I would like to say as much for the quality of the papers, but candor compels the statement that many of them failed to come up to the standard which the Association ought to demand. As usual, a few of the papers were exceptionally valuable, either from their scientific character or their practical importance.

The first paper read gave a review of the reforms demanded by sanitarians in the "Construction of Habitations for the Poor." The author, Dr. C. W. Chancellor, of Baltimore, suggested that an unsanitary house should be declared a public nuisance and dealt with accordingly. Only in this manner could the law reach the difficulty.

Major S. A. Robinson, of Washington, followed with an excellent practical account of how to construct healthy habitations for the poorer classes. He considered in detail the site, water- and drainage-fixtures, light, and ventilation. This was one of the best papers presented during the meeting. The speaker showed by his manner of treating the subject that he had a thorough practical acquaintance with all its details. The same may be said of a paper of great interest to the practical sanitarian, by Dr. W. K. Newton, of Paterson, New Jersey, describing how the sanitary survey of a house should be conducted.

Drs. George H. Rohé, of Baltimore, Walter Wyman, United States Marine Hospital Service, and Adolph Alt, of St. Louis, read papers on the "Hygiene of Occupations." The essay of Dr. Rohé was statistical, and showed, numerically, the influence of certain occupations upon health and the duration of life. Mortality-tables published in 1874 by the Massachusetts Bureau of Registration were analyzed, and their results compared with those derived from European sources. The trades and occupations dangerous to health were briefly indicated.

The paper of Dr. Wyman concerned itself exclusively with the dangers and hardships of the oystermen engaged in the oyster-fisheries on Chesapeake Bay. The rapacity and brutality of the employers, and the extremely hazardous nature of the occupation, were graphically described.

Dr. Alt referred to the numerous cases of ocular diseases attributable to mechanical injuries in certain occupations, especially stone-cutters. He proposes that employers be made pecuniarily liable for injuries sustained by workmen if these result from neglect of proper precautions which can be enforced by the former.

The President, Dr. A. L. Gihon, Medical Director United States Navy, delivered a very brilliant address at the close of the first day's session. It was an eloquent appeal for more earnest personal interest in practical hygiene.

Among the papers read were several on adulterated and disease-producing foods. Dr. J. Cheston Morris, of Philadelphia, discussed "The Adulteration of Milk and the Milk-Supply of Large Cities." He recited the evils of impure and adulterated milk, and recommended that sealed glass jars should be used for the transportation of milk. In this way the adulteration of the milk in transit between the producer and consumer could be guarded against. A simple method of testing the purity of the milk should be placed in the hands of the consumer, and in this way fraud on the part of the producer could be detected. Dr. B. F. Davenport, of Boston, showed how the inspection of milk had resulted in great improvement in the character of the supply furnished in the latter city.

Hon. Erastus Brooks, of New York, read an essay on "Food and Food-Adulteration," in which the subject was well treated, and many statistics given showing the extreme extent to which many of the common articles of food and medicines are sophisticated.

Prof. V. C. Vaughan, of the University of Michigan, gave an account of an outbreak of cheese-poisoning recently observed in Michigan. Over three hundred cases of poisoning from eating cheese had occurred in that State within the past six months. None of the cases were fatal. The symptoms were those of intense gastro-intestinal irritation. The cheese which produced the morbid effects was excessively acid. A practical method of detecting the acidity was by the use of litmus-paper, which any grocer or householder could apply. Excessive acidity of the cheese should arouse suspicion concerning its quality.

Dr. Charles Smart, United States Army, read a paper on the "Water-Analysis of the Future," in which the present defective methods were criticised. Dr. H. B. Baker, of

Michigan, drew attention to the relation of the depth of the soil-water to the spread of typhoid fever in that State. This paper was illustrated by charts which clearly showed the coincidence of a low ground-water level and increased prevalence of typhoid fever, and *vice versa.*

Dr. Joseph Holt, of New Orleans, described the new system of quarantine which it was proposed to introduce at the outlet of the Mississippi River. The system consists of absolute disinfection of passengers, baggage, cargo, and ship, and only incidental detention. Dr. Holt's plan found much favor with most of the members. There can be no question of its superiority, if properly carried out, over any other system now in use.

Several interesting papers on "School Hygiene" and on "Cremation" were read, and both subjects referred to committees.

Dr. J. F. Hibbard, of Indiana, introduced a resolution to investigate the subject of germicides, disinfectants, and antiseptics in their relations to preventive medicine, to formulate the result of their inquiries, and to submit the same at the meeting of the State Boards of Health, in Washington, on the second Tuesday in December. The committee was constituted for practical work, and consists of Dr. Geo. M. Sternberg, United States Army, chairman; Dr. J. H. Raymond, of Brooklyn; Prof. V. C. Vaughan, of Ann Arbor; Dr. W. H. Watkins, of New Orleans; Dr. Chas. Smart, United States Army; Prof. A. R. Leeds, of New Jersey, and Dr. George H. Rohé, of Baltimore.

Dr. Jas. E. Reeves, of Wheeling, read a report of an elaborate sanitary survey of the Ohio River for the first one hundred miles of its course, and showed the relations of the river to the sewage-disposal and water-supply of the cities and towns along its banks. Dr. E. S. Elder, of Indiana, read an extremely valuable report embodying the results of a sanitary survey of the school-houses in that State. It is very desirable that this sort of work should be continued. Measures of reform can only be intelligently introduced after the actual conditions needing reform are thoroughly understood.

The most important outcome of the meeting was the offer on the part of one of the members of the Association, Mr. Henry S. Lomb, of Rochester, to place two thousand dollars in the hands of a committee, to be distributed in prizes of the value of five hundred dollars each. Mr. Lomb has also headed a subscription-list with fifty dollars to defray the necessary expenses of the committee on disinfectants and antiseptics, above referred to. Mr. Lomb, who is known at his home as a practical philanthropist, is a member of the microscope-manufacturing firm of Bausch & Lomb.

The prizes are to be open to universal competition, and the following subjects are suggested by Mr. Lomb and the committee having the matter in charge;

1. Healthy Homes and Foods for the Working-Classes.

2. Sanitary Conditions and Necessities of School-Houses and School Life.

3. Disinfectants and Individual Prophylaxis against Infectious Diseases.

4. Appliances and Means for Saving Life, and for Protection against Injurious Influences of Occupations upon Health.

The committee to act as judges will consist of one member appointed by the National Board of Health, three appointed by the Executive Committee of the American Public Health Association, and one by the President of the Conference of State Health Boards. All essays must be handed to the committee before the 1st of April, 1885. The conditions of the competition will be announced through the medical journals. It is intended, I believe, that the essays shall be short and practical, in order that the mass of the people to be benefited can be reached and properly influenced. Elaborate theoretical dissertations will stand very little chance of winning a prize.

A notable feature of the meeting was the illustrated lecture by Dr. Geo. M. Sternberg, the distinguished mycologist, on "Disease-Germs." For nearly two hours the lecturer held the attention of a large audience while showing various examples of innocent and pathogenic micro-organisms by means of micro-photographs and the magic lantern.

The officers elected for the ensuing year are:

President.—Dr. Jas. E. Reeves, of West Virginia.

First Vice-President.—Hon. Erastus Brooks, of New York.

Second Vice-President.—Dr. Henry B. Baker, of Michigan.

Treasurer.— Dr. J. Berrien Lindsley, of Tennessee.

Executive Committee.—Drs. H. P. Walcott, of Massachusetts; C. Smart, United States Army; G. B. Thornton, of Tennessee; D. W. Hand, of Minnesota, and H. B. Horlbeck, of South Carolina.

Too much praise cannot be awarded to the local committee and the citizens of St. Louis for their active efforts to make the meeting pleasant and successful. All the clubs and places of interest were open to the members of the Association, the city was illuminated in their honor, and carriages were at their disposal for rides through the city and parks. I should fail in my duty did I not mention the names of those largely instrumental in securing these advantages to the Association. They are Dr. J. G. Spiegelhalter, chairman, and Dr. Geo. Homan, secretary of the local committee. It was a matter of considerable comment, however, that the medical profession in St. Louis contributed but a small portion

of the attendance at the sessions. The thought is forced upon one that St. Louis doctors take very little interest in sanitary progress. Another noticeable thing was that representatives from Chicago and Cincinnati were conspicuous by their absence. Can this be accounted for by local jealousies?

The next meeting will be held in Washington, in December, 1885.

Among the distinctively medical movements now in progress in St. Louis is the organization of a Post-Graduate School and Polyclinic. A fine building is in course of erection, and will be ready for occupation in the spring. The members of the new faculty are Drs. W. A. Hardaway, dermatology; H. N. Spencer, otology; W. C. Glasgow, laryngology; C. E. Michel, ophthalmology; J. K. Bauduy, neurology; Geo. J. Engelmann, gynæcology; P. G. Robinson, general medicine; H. Tuholske, surgery, and A. J. Steele, orthopædic surgery. Most of these are at present connected with the Missouri Medical College, of which the Polyclinic seems to be an outgrowth.

The medical schools here have pretty fair classes, and the teachers in the Missouri and St. Louis Medical Colleges seem fairly to represent the best portion of the profession.

CORSAIR.

ST. LOUIS, October 17, 1884.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held October 2, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. F. H. BOSWORTH read a paper on

THE THREE TONSILS: SOME PRACTICAL SUGGESTIONS AS TO THEIR STRUCTURE, FUNCTION, AND DISEASES.

The author said he had for some time entertained certain views with regard to the three tonsils different from those usually expressed in medical literature. Speaking of the three tonsils he meant the two glandular masses found between the pillars of the fauces and that found in the vault of the pharynx, the latter first recognized and described by William Hunter. The former were called the faucial tonsils, and the latter the pharyngeal tonsil.

The faucial tonsils are not, as generally described, covered by a fibrous sheath, nor are they necessarily almond-shaped, but of whatever shape the morbid process may have given them. The tonsil is not an organ of the body in the sense that the liver or spleen constitutes an organ, and therefore it has no special function to perform in the animal economy. Virtually there are no tonsils: the organs so called do not exist in the healthy throat, but are the result of a morbid process. All mucous membranes are richly endowed with glands, and perhaps no portion of the mucous tract calls for a greater amount of mucus in the performance of its function than do the upper air-passages, and here we find the glands aggregated in masses. In a condition of health this aggregation of glands does not project prominently from the mucous membrane, nor is their existence easily demonstrated by gross inspection. But the mucous membrane of the upper air-tract is liable to repeated attacks of inflammation, especially in the young, and the tendency of a chronic inflammatory process is to develop hypertrophy in these glands. Dr. Bosworth considered that the only function of the masses of glands in question is to supply mucus or lubricating fluid.

The three tonsils are liable to the same diseased conditions. These might be considered under the heads acute follicular tonsillitis, subacute tonsillitis, croupous and diphtheritic inflammation of the tonsils, and hypertrophy. He did not believe that phlegmonous inflammation ever occurrs in the tonsils, and thought that quinsy was rather a disease of the cellular tissue of the fauces than of the tonsils. It involved the areolar tissue, especially of the soft palate, in rare instances of the pharyngeal walls, but not the glands. He believed it to be usually due to the rheumatic habit. Within the past three years one hundred and thirty-three cases had come under his observation, eighty-eight cases being males and forty-five females. The oldest patient was 69 years, and the youngest 9 months of age. Of the entire number of cases the phlegmon occurred in the soft palate in one hundred and fifteen cases; in the pillars in eleven cases; beneath the tonsil in two cases, but in the tonsil proper in no case. A large number of cases of quinsy were aborted by the administration of the salicylates, and when not aborted the medicine seemed to hasten suppuration. He gave a tablespoonful, every two hours, of a solution containing three drachms of the salicylate of soda in six ounces of water. He had also found the bicarbonate of soda useful, as recommended by Dr. Barker, but not equally efficacious with the salicylate. If an abscess formed, it should be treated as an abscess of any other portion of the body,—by incision.

Dr. Bosworth thought that in acute follicular tonsillitis there is a greater amount of constitutional disturbance and fever than could be accounted for by the local affection, and he had been led to regard it as one of the essential fevers, liable to recurrence.

Hypertrophied tonsils give rise to a train of symptoms mainly due to mechanical obstruction of the passages. The enlarged tonsil shows a tendency to subside at the age of puberty. It develops purely from a local

morbid process, and is not the manifestation of a dyscrasia. Hypertrophy of the pharyngeal tonsil had been described by many writers as adenoid tumors or vegetations of the vault of the pharynx. If the hypertrophied tissue offer a mechanical obstruction, it should be removed. Local medication, he believed, had no effect whatever in reducing genuine hypertrophy of the glands. It had been suggested that only a portion of the tonsil be removed; but there was no more reason for this than there was for removing only a portion of a tumor developed elsewhere on the body. The danger from hemorrhage has been exaggerated. In children there is only a slight amount of bleeding; and if in the adult considerable hemorrhage should arise, it could best be checked by the actual cautery. It would be found to come only from the nutrient artery, and on arterial hemorrhage styptics had no effect. Injury to the carotid artery is an unpardonable blunder, and is not to be considered as a danger of the operation.

DISCUSSION.

The PRESIDENT called upon several gentlemen, not specialists in diseases of the throat, to discuss the paper, because of their experience with certain points contained in it. He first said, with regard to his use of the bicarbonate of soda in quinsy, mentioned by the author, that he had been in the habit of seeing a few cases of quinsy each year, and, until some years ago, they almost invariably ended in suppuration. But, since he had begun the local application of bicarbonate of soda, in not a few of the cases the disease was aborted. A marked instance of the kind occurred in a patient seen with Dr. Bosworth, a gentleman of eminence in literature, who was suffering greatly from threatening abscess. The next morning after the use of the remedy he was found at the breakfast-table.

Dr. DOUGLAS would agree with the author on most points, but there were a few with which he must take exception. He would agree with him, for example, that quinsy was a manifestation of rheumatism, or, especially, of gout, and the treatment which he had employed for this affection was largely that used by the President, namely, bicarbonate of soda. At the same time he gave the ordinary remedies against gout. He had found the gargle and spray of bicarbonate of soda also useful in cases of enlarged tonsil; but one of the most beneficial remedies for this class of cases was a powder composed of one part of menthol to a hundred parts of sugar of milk. He would not always resort to the knife for the removal of the enlarged tonsil. It could be slowly but surely reduced in size by the persistent use of a powder composed of salt, camphor, ammonia, and sugar of milk.

Dr. F. H. HAMILTON was inclined to agree with Dr. Bosworth that the enlarged tonsil should be removed by the knife; yet he had often observed that the enlarged tonsil of childhood disappeared before the twentieth year. He supposed that the author, when he said there was no danger connected with removal of the tonsil, meant to except the acute or engorged state, and cases of the hemorrhagic diathesis. The question had been raised whether all or only a part of the tonsil should be removed: he should say all that the knife would include.

Dr. JACOBI believed that the only efficient treatment for the enlarged tonsil was its removal. Applications would not reduce its size, and where they had apparently done so the reduction was due to some other cause. The enlarged tonsil might remain stationary and appear smaller after the lapse of years because of the growth of the fauces. As to the danger of hemorrhage, there usually was but little loss of blood, but it might be profuse from cutting into the soft palate,—an accident which could not always be avoided. The most efficient means for stopping hemorrhage when it occurred was digital compression, applied perhaps for an hour or more. He could not agree with the author's view that follicular tonsillitis was an essential fever. He looked upon it as a local disease. What Dr. Bosworth took to be an essential fever was probably diphtheria, for cases of diphtheria were often overlooked or mistaken for some other affection. It was a great mistake to suppose that every patient sick with diphtheria must necessarily die. There were many mild cases which went unrecognized, and which were all the more dangerous for that reason, as they were the more likely to spread the disease. Dr. Jacobi laid particular stress upon this point because of its importance to the public health.

Dr. WEBER had not yet seen a case which went to substantiate the view that a phlegmonous inflammation around the tonsils was due to the gouty habit. He had found it most frequently in patients of poor general health.

The PRESIDENT remarked that guaiacum had once been strongly recommended in the treatment of quinsy on account of the supposed gouty origin of the affection, but he had not obtained the results with it which he had been led to anticipate from reading certain articles in the medical journals.

Dr. POST thought the best treatment for the enlarged tonsil was extirpation.

Dr. HAMILTON had found the external application of ice or snow the best means for checking hemorrhage after removal of the tonsil.

Dr. FRUITNIGHT had aborted some cases of quinsy by the administration of the tincture of aconite.

Dr. JARVIS again called attention to a distinction which he had made between the soft and hard or indurated enlarged tonsil, the

latter being found in the syphilitic. If the scirrhous tonsil were cut, it would surely give rise to hemorrhage, and might result fatally. He employed the knife in the removal of the soft enlarged tonsil, and the cautery or snare in the removal of the scirrhous tonsil. He did not think any more of the tonsil should be removed than was necessary, for it doubtless served some physiological purpose, as the lubricating of the fauces and protecting the carotid artery.

Dr. BRANDEIS said he believed in the Darwinian theory of the survival of the fittest: the tonsils had survived some thousand years, fulfilled some physiological purpose, and he doubted not that they performed their function well, whatever it might be. But they, like other structures, were liable to disease, and a diseased tonsil might be worse than no tonsil at all, and therefore he believed it should in proper cases be extirpated. He then pointed out the advantages of the tonsillotome over the knife in certain cases. Contrary to the experience of Dr. Bosworth, he had found hemorrhage in young subjects rather than in the adult, although not extreme. To prevent hemorrhage, he allowed the patient to sip a solution of tannic acid, and, if necessary, he applied pressure. Dr. Bosworth's description of quinsy corresponded with that in Ziemssen's Cyclopædia, there called peri-tonsillitis, but Dr. Brandeis could not accept the view that it was always an inflammation of the peri-tonsillar sheath. He recommended aconite and the ammoniated tincture of guaiacum in its treatment until an abscess should have formed.

Dr. CORNING had arrested a severe hemorrhage after tonsillotomy in one case by the use of his carotid compressor.

Dr. BOSWORTH, in closing the discussion, said, with regard to the possibility of reducing the size of the tonsils by astringents, that he believed it could not be done. Their size, however, might be reduced in the young, in whom they were in a state of chronic inflammation, by undergoing contracture. This would account for the diminished size of the tonsils on reaching adult life. As to hemorrhage in the young, it was only an oozing; considerable hemorrhage occurred only in the adult. That tonsillotomy was not dangerous was apparent from the fact that in all medical literature not a single fatal case was recorded. The cases in which the carotid artery had been wounded were excepted. This accident could never occur in the hands of a surgeon. In arresting hemorrhage with the actual cautery, the iron should be applied from above downward, that it might not be cooled by the flow of blood before coming in contact with the bleeding vessel He regarded peritonsillitis as a very good name for quinsy, but he did not believe there was a peri-tonsillar capsule proper. As to the tonsils performing their function, he did not believe they existed in the normal state, but that they were the result of disease.

The Academy then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held October 8, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

CANCER OF THE STOMACH.

Dr. SATTERTHWAITE presented the stomach, pancreas, heart, and kidneys of a man 53 years of age, whom he was called to see in consultation on the 7th of September of the present year. The patient had had a hemiplegic attack, the right upper and lower extremities being slightly involved, but recovering within twenty-four hours. He had lost flesh rapidly during the last month, and gradually during the past two years. His physician had not been able to make out any special disease, the heart, lungs, and urine appearing to be normal; he had suffered some pain in the epigastric region, but no tumor could be felt. During the last month the patient had not been able to retain solid food longer than from twenty-four to forty-eight hours, when it would be vomited up with a good deal of effort. The cachectic appearance developed. About two weeks before death another hemiplegic attack occurred, and, besides losing power over the right extremities, there was also difficulty with speech and swallowing, but this, after a time, almost entirely disappeared. During the last four or five days of life the patient refused to eat, on the ground that his food would not stay down, and he preferred starvation to the pain and vomiting. Death took place from starvation.

At the post-mortem examination a circular patch, of the size of a silver half-dollar, was found at one side of the pyloric end of the stomach, not apparent to the eye, but readily felt with the finger. The pyloric opening admitted only a lead-pencil. This patch undoubtedly acted as a valve at times, and obstructed the exit of food from the stomach. There were some nodules in the pancreas, and parenchymatous nephritis. The specimens from the stomach and pancreas had not yet been examined microscopically, Dr. Satterthwaite preferring to exhibit them in the fresh state, but doubtless the disease was carcinoma.

The PRESIDENT thought that malignant disease should have made greater progress within two years.

Dr. SATTERTHWAITE had seen a case in which the nodule at the pylorus had been recognized two years before death, and symptoms of cancer had existed for a longer time.

Dr. J. C. PETERS thought this specimen might possibly turn out a duplicate of the first

one presented to the Society in 1844. In that case the patient had had somewhat similar symptoms, and at the post-mortem examination it was expected that the thickening which was present in the stomach would be found to be cancerous, but it proved to be simply thickening of the areolar tissue. It was regarded as a rare condition.

Dr. CARPENTER referred to a case in which a cancerous nodule over an inch in diameter, situated three inches from the pylorus, was found at the post-mortem examination, no gastric symptoms having been present during life.

NASO-PHARYNGEAL FIBRO-SARCOMA.

Dr. LINCOLN removed the specimen, July 22, from a boy 16 years of age, who had never been very strong, and who had always suffered from nasal catarrh. He first noticed obstruction to nasal respiration and tumor in 1881. From this date he had suffered from frequent severe nasal hemorrhage, usually coming on after active exercise, but sometimes during sleep. A physician had attempted to remove the tumor, which could then be seen through the nostril and mouth, by the ordinary polypus forceps, but failed. Dr. Lincoln saw the patient first through the courtesy of Dr. Satterthwaite on July 12, at which time there was a noticeable fulness on the right side of the nose; the right nostril was filled to the margin by the growth, which pressed the septum to the left; the soft palate was deflected to the perpendicular, and below it, filling the naso-pharyngeal space, the tumor could be seen, apparently having its principal attachments to the vault of the pharynx and roof of the nostril. It was exceedingly vascular, and evidently growing rapidly, and therefore an immediate operation was advised without preliminary treatment by electrolysis. On July 22 the galvano-cautery wire was applied to the base of the tumor while the patient was under the influence of an anæsthetic, and Dr. Lincoln succeeded in cutting through the pedicle and drawing the tumor out entire through the mouth, no hemorrhage taking place during the operation. The tumor measured in its greatest length four inches, and two and a half inches in thickness. The surface of attachment, which measured two inches by one and three-fourths, was then cauterized. The weight of the growth was two ounces and three-fourths. A week after the operation the cut surface presented a healthy appearance. The patient had not yet consented to a reapplication of the cautery for the purpose of preventing redevelopment of the growth.

The PRESIDENT thought there could be no comparison between this mode of operating and the old mode of preliminary tracheotomy, tamponing the pharynx, and removing the upper jaw. It seemed, however, that there were some cases of naso-pharyngeal tumors in which the wire could not be applied to the base of the tumor on account of its extensive attachments. He mentioned two cases in which he operated by removal of the upper jaw, the tumor having extensive attachments to the base of the skull, etc. One of the patients died of shock, apparently due to an extension of the growth into the skull, and in the second case the result was similar, although death took place later. He now had a patient who was begging for a similar operation, but he hoped first to have a consultation with Dr. Lincoln as to the advisability of trying the galvano-cautery. The great difficulty in this class of cases was that usually they did not come to the surgeon until it was impossible to apply the wire, and the general health was too greatly reduced from repeated hemorrhages, etc., to make success from a surgical operation at all probable.

Dr. HOWE thought that even in the bad cases referred to, with such extensive attachments, the tumor might be removed piecemeal by the wire.

The PRESIDENT had had one such case, in which a gentleman skilled in this manner of operating had removed a portion of the tumor with the wire, and, while the patient's condition was much improved thereby, the pain consequent on ulceration at the points where the wire had been applied deterred him from submitting to further treatment.

Dr. SATTERTHWAITE thought the operation which Dr. Lincoln had performed, at which he was present, had required a great deal of manual dexterity. A distinguished throat-specialist had said that the tumor could not be removed except by first removing the upper jaw, but Dr. Lincoln performed the operation with the galvano-cautery wire with a single application of the loop. The patient had had no hemorrhages since the operation, and had gained greatly in flesh and strength. He had been impressed very favorably with the operation, and would be glad to hear Dr. Lincoln's further experience with it.

Dr. LINCOLN said he had had six cases, two of which were still undergoing treatment. Of the other four cases he believed there was no possibility of recurrence. He had had no fatal result. With regard to the difficulties overcome during the operation, he referred to a case operated upon in 1876. The patient had been operated upon by Dr. Willard Parker, and also by Dr. Lutkins, who referred him to Dr. Lincoln. At the time when he saw him, the boy, five and a half feet high, weighed only sixty-eight pounds. His condition was such that death seemed inevitable; several surgeons had said that no interference by treatment was justifiable. The tumor had so developed as to cause protrusion of the right eye, projected through the nostril to the margin of the upper lip, and in the mouth to such an extent that the tongue had to be depressed at night by the spatula to enable the patient

to sleep. There had been frequent hemorrhages. Dr. Lincoln began preliminary treatment by electrolysis, making about twenty-five applications. The growth of the tumor was thus checked, hemorrhage ceased, and the patient recuperated so that the final operation could be undertaken with perfect safety. The wire was applied, the tumor was removed entire without any hemorrhage; some applications of the cautery were made subsequently, and there had not been any signs of return of the growth since. The other cases were similar, but not quite so pronounced.

FIBRO-CYST OF THE UTERUS.

Dr. PRUDDEN presented a specimen which had been sent him by Dr. C. C. Stockard, of Columbus, Mississippi, and the history of which had been published in the *Medical Record*, August 16, 1884. It was interesting principally on account of its large size. Together with the fluid contents, which had been drawn off six days before death, it weighed one hundred and thirty-five pounds. Eight gallons and seven pints of fluid had been withdrawn by tapping. The microscopical examination showed the specimen to be a fibroma of the uterus. It had developed in a negress who had borne children.

FATAL INTESTINAL OBSTRUCTION.

Dr. C. W. KNIGHT presented a part of the intestine and uterus, which had been removed from the body of a negress, 35 years of age, unmarried, who had been the subject of constipation for a good many years, with frequent attacks of colic, but she never consulted a physician. Frequently her bowels did not move once in two weeks. After her last attack had existed two weeks, she began to take purgative medicines, and the third week sent for a physician, who found no constitutional disturbance. She was up and about her room until the last day of life, when she began to vomit copiously, had enormous distention of the abdomen, and died suddenly. At the autopsy the small intestine was found to be distended and congested, and about five inches from the cæcum there was a constriction between two fibrous bands, which had produced a furrowed appearance in the gut, but had not caused ulceration. The obstruction was immediately relieved on cutting the constricting bands. There were also fibroids in the uterus.

THE NEW ENGLAND JOURNAL OF DENTISTRY has become united with and merged into the *Dental Association Journal*, which will hereafter be published as the *Archives of Dentistry*. Preparations are making on an extensive scale for editorial collaboration from all parts of the country, and no effort will be spared to make the *Archives* a national and representative dental journal.

REVIEWS AND BOOK NOTICES.

DIPHTHERIA, CROUP, ETC.; OR, THE MEMBRANOUS DISEASES, THEIR NATURE, HISTORY, CAUSES, AND TREATMENT; WITH A REVIEW OF THE PREVAILING THEORIES AND PRACTICE OF THE MEDICAL PROFESSION; ALSO, A DELINEATION OF THE NEW CHLORAL-HYDRATE METHOD OF TREATING THE SAME, ITS SUPERIOR SUCCESS, AND ITS TITLE TO BE CONSIDERED A SPECIFIC. By C. B. GALENTIN, M.D. Small 8vo, pp. 174. New York, J. H. Vail & Co., 1884.

We give the title of this little book in full, in order to be understood when we say that the same literary fault mars the book that mars the title.

The author has produced a work which is too large for a tract and too small for a treatise and combines many of the faults of both with few of the virtues of either. It has a vice of comprehensiveness. Having something to say, he has forgotten that brevity is the soul of wit, and so obscured it with tediousness, the limbs and outward flourishes of wit, that the thing to be said seems scarcely said at all.

This is much to be regretted, because the gist of the matter, namely, the treatment of diphtheria by the chloral hydrate both constitutionally and locally, is of great importance, and would have attracted wide attention if the author had presented his views and the results of his experience in a compact, practical article in one of the journals.

We believe that this mode of treatment—which, by the way, is not so exclusively his own as the author appears to think—is an excellent one, and we agree with him in his views as to the questionable value of iron and potassium chlorate. We regret that the good he seeks to do is likely to be restricted by the form he has selected for the publication of his opinions. J. C. W.

SHAKESPEARE AS A PHYSICIAN. By J. PORTMAN CHESNEY, M.D. J. H. Chambers & Co., Chicago, St. Louis, Atlanta, 1884. Cloth, 8vo, pp. 226.

"O, the recorders!—let me see one."—*Hamlet.*

The aim of the author of this work is to record—grouped under the headings of Obstetrics, Psychology, Neurology, Pharmacologia, Etiology, Dermatology, Organology, Chirurgery, and Miscellaneous—every word which in any way relates to medicine found in the complete works of Shakespeare (which text is not stated); and, if he had done no more than this, the work would have had both interest and value. The digressions, irrelevant quotations, and almanac anecdotes which pad the book are out of place, and should have been omitted. Considerable labor has been spent upon the compilation,

but it is marred by this evident effort at book-making. Sixteen wood-cuts more or less adorn the pages of the work, one-half of which have absolutely nothing whatever to do with Shakespeare, but illustrate topics entirely foreign to the text. Their irrelevancy and value may be judged by some of their titles: An Illustration of the Benefits of Protracted Lactation; Enquiry on Lunacy (Medical Experts to the Right); The Doctor looks for the Skeleton behind Him; The Effects of Gathering May-Apple Root; The Woodman and his Arrangement for Cheap Boarding; The famous "Dr. Sunrise" condescends to visit the Good People of St. Joseph. If this book was intended to advance the literary reputation of the author, it might be appropriately introduced by a quotation from "Love's Labor's Lost." F. W.

Drugs and Medicines of North America. A Quarterly devoted to the Historical and Scientific Discussion of the Botany, Pharmacy, Chemistry, and Therapeutics of the Medicinal Plants of North America, their Constituents, Products, and Sophistications. J. N. Lloyd & C. G. Lloyd, Cincinnati, 1884.

This handsomely-printed quarterly, devoted to a special department of materia medica, contains many valuable illustrations, and is a welcome addition to the literature of our indigenous flora. The high price of such works usually debars many from possessing them; but this publication, at one dollar per year, is free from this objection, and will find many appreciative and interested readers. The contents of the three numbers which have so far appeared show careful preparation, and are highly creditable.

The Medical Record Visiting-List for 1885, published by William Wood & Co., is out, and can be obtained, with or without dates, for thirty or sixty patients per week. It is handsomely bound in morocco, and is a durable and useful visiting-list.

GLEANINGS FROM EXCHANGES.

Operative Opening of Pulmonary Cavities.—Dr. E. Bull (Christiania), in a paper on this subject, read at the International Medical Congress, Copenhagen, laid down the following propositions: 1. Abscesses of the lung which can be diagnosticated with certainty, and are so situated that they can be opened through the chest-wall, should be treated in the same way as pleural empyema. 2. The condition is the same with regard to limited gangrene of the lung. If several gangrenous foci exist, each one must be treated separately. 3. Echinococci, and, 4, foreign bodies in the lung are to be treated in a similar manner. 5. In bronchiectasis the formation of a pulmonary fistula is indicated only when the accumulation of stagnant matter in large cavities essentially contributes to the deterioration of the patient's condition. 6. In rare cases of tuberculosis, where a large cavity is the predominating condition, the cavity may be laid open with the view of improving the condition of the patient. 7. The operative puncture of a pulmonary fistula is justifiable as a palliative measure. 8. In cases where diagnosis cannot be arrived at, exploratory puncture is certainly of much value; positive as well as negative results may be derived from it. 9. Adhesion of the layers of the pleura ought not to be insisted on as an absolutely necessary preliminary to the opening of pulmonary cavities. 10. Amyloid degeneration is not an absolute contra-indication to a palliative operation. 11. The use of the thermo-cautery is to be recommended both for the opening of cavities and for the destruction of diseased portions of lung-tissue.—*British Medical Journal.*

Comedones.—At the last meeting of the American Dermatological Society, Dr. A. Van Harlingen recommended for the treatment of comedones a paste composed of glycerin, three parts; vinegar, two parts; and kaolin, four parts. This, which had been first suggested by Unna, he regarded as having decided value.

The English Commission sent to investigate the cause of the cholera in India are now busily prosecuting the work at Bombay. It is announced that Dr. Klein has swallowed some of the comma-bacilli without evil results.

MISCELLANY.

Severe Punishment of a Druggist.—The case of a druggist in the upper part of the city, who has recently been found guilty of involuntary manslaughter by a jury because of a mistake which caused the death of a child, calls for a word of comment. Mr. Heintzelmann, the unfortunate druggist referred to, has been engaged in his business in this city for over twenty years, and has in that time earned an enviable reputation for devotion to his work, and for skill, attention, and carefulness, among physicians as well as the community at large. The mistake, it appears, was made in his store, though, he claims, not by him personally. He adopts the check-system for prescriptions, which indicates his great caution: this was not proof, however, against an ignorant woman picking up the wrong medicine, which happened to be a liniment instead of a baby-syrup. Although the bottle was decorated with skull and cross-bones and plainly marked "poison" and "for external use," this woman, who declares that she cannot read, administered some to her baby, who died of lead- and laudanum-poisoning, for which the coroner held the

apothecary responsible. Although the medicine was very different from what the description given by the doctor had led her to expect that it would be, and despite its bad taste and smell, three teaspoonful doses were deliberately given by the mother of the child, at intervals of two hours, and not until then was the physician sent for, who detected the mistake; but the child was already moribund. It would really seem as if the druggist had taken every reasonable precaution, first by requiring a check, and secondly by placing the word "poison" and the symbol on the bottle, and that his responsibility should not be increased in order to accommodate exceptional ignorance. Contributory negligence was clearly present upon the part of the attendants of the child, who should have examined the medicine as soon as received, and returned it for explanation. It certainly does not seem right that exemplary punishment should be visited upon the druggist-defendant in this case; and we hope that his application for a new trial will be granted, in order that the case may be more fully considered, and that the responsibility may be more justly apportioned.

A CURIOUS case in regard to the removal of the dead came up recently in the Surrogate's Court, at Brooklyn, New York, under the following circumstances:

Gardiner H. Wolcott died at Astoria in November, 1881, and was buried in Greenwood Cemetery, at Brooklyn. He was supposed to be intestate, and his property, amounting to about forty thousand dollars, was divided up among the next of kin. Not long since a will was found in which was the following provision: "It is my special command that my remains lie beside those of my darling Nina's in Greendale Cemetery. Any expense in carrying out this wish will be paid from my estate."

Greendale Cemetery is situated at Meadville, Pa., and the Nina mentioned was an actress named Nina Varian. He was supposed to be unmarried, but there was some evidence that she was in reality his wife. The question then came up, Shall the testator's wish as to a burial-place be carried out? The estate was divided up, and the executor had no means of defraying the expenses.

Under these circumstances he applied to the Surrogate's Court for an order requiring the persons who had received the estate to pay the expense of removal according to their respective shares. The relatives opposed the application, and the Surrogate denied it.

It was clear that if the will had been found at the time of death, or before the distribution, the removal might have been carried out by the executor; but the Surrogate now says, "The direction of a court should not be sought to authorize the executors to incur an additional expense when the immediate parties interested in the estate will have to be called upon to bear their proportionate expenses while they at the same time are strongly protesting against the removal of the remains."

A REMARKABLE FAMILY QUARREL.—A novel point in the law of the home came up recently in Ohio, where a father asked a court to grant him an injunction against his two sons living at home, and upon his showing the case was a strong one. The sons were 33 and 26 years of age respectively, unmarried, strong, and able to earn their own living. The father said they had never paid anything for their board, and that when requested to leave the house they had refused. They had also been so violent about the house, and had used such profane language, as to make their mother sick, and both of them afraid of their lives. The furniture had also been broken by them during some of their freaks. The judge granted a temporary injunction, and the case is to come up for a further hearing.

THE first issue of the *Medical Chronicle*, of Manchester, England, edited by Jas. Niven, M.A., M.B., and W. J. Sinclair, and published under the direction of an able committee, has been received. It is a monthly of large octavo size, 120 pages, printed on white paper, with clear type, and presents a very attractive appearance. The contents of the initial number include five original communications, besides a chronicle of nearly a hundred pages of progress in the several departments of medicine. The journal is ably edited, and will be received with favor by the profession.

THE DONATION of half a million dollars to the College of Physicians and Surgeons of New York by Wm. H. Vanderbilt is one that commands admiration for the feelings which prompted the gift and the wisdom shown in the choice of an object for the donor's munificence. It is understood that a plot of ground two hundred by three hundred and fifty feet, between Fifty-ninth and Sixtieth Streets, opposite Roosevelt Hospital, has been chosen. There is ample room for future development of the college, and for the erection of laboratories and other buildings as needed.

THE *Therapeutic Gazette*, published by Mr. Geo. S. Davis, of Detroit, will hereafter be edited by Prof. H. C. Wood and R. Meade Smith. It is announced that the editorial office will be in this city. The *Gazette* has already achieved marked success in its field, and under its present management its usefulness to both pharmacology and therapeutics will be undoubtedly advanced, and the journal kept at a high standard.

THE EPIDEMIC OF CHOLERA IN ITALY has brought out, in an unexpected way, a curious relation existing between the medical profession and the public. Sanitary officers engaged in their duties in some of the small villages have been mobbed, while physicians

found patients who refused their aid and looked upon their ministrations with marked and open mistrust.

In the daily press we observe that Judge Tourgee is credited with the statement that the pathway to success is so plain in the professions of law, medicine, and theology that it almost requires the possession of genius in order to fail in any of them. He maintains an eloquent silence with regard to the profession of journalism: does he mean to imply that the same rule holds good, or is it reversed?

Encyclopædia of Medical Wit, Humor, and Curiosities of Medicine.—Julius Wise, M.D., proposes to publish a large volume with the above title, and respectfully solicits the kindly aid of the profession in collecting material suitable for the work. His address is 806 Olive Street, St. Louis, Missouri.

The reception given by the Pathological Society to Dr. Delafield, of New York, on the 22d of October, was a success. Among the invited guests were Profs. Mallett and Osler.

In Kent sixty-nine persons were poisoned by, and one died from, eating shrimps which had been taken from near the mouth of a sewer.—*British Medical Journal*, October 11.

NOTES AND QUERIES.

OBITUARY.

Professor Louis Alexander Dugas, M.D., of Augusta, Georgia, died October 19, in the seventy-ninth year of his age. Born in Washington, Georgia, in 1806, he studied medicine with Dr. Dent, of Augusta, and was graduated in 1827 from the University of Maryland. After several years' study in Europe, he returned to his native State, and was one of the founders of the Medical College of Georgia, in which he held the chair of Surgery during the remainder of his life. The University of Georgia conferred the degree of Doctor of Laws upon him in 1869. He was one of the Vice-Presidents of the International Medical Congress held in Philadelphia in 1876, and was repeatedly elected President of his State Medical Society. He was editor of the *Southern Medical and Surgical Journal* for a number of years.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 12, 1884, *TO OCTOBER* 25, 1884.

Norris, Basil, Lieutenant-Colonel and Surgeon.—Relieved from duty as attending-surgeon, Washington, D. C., and ordered for duty as Medical Director Division of the Pacific and Department of California, relieving Surgeon E. I. Bailey. Col. Bailey, on being relieved, will assume the duties of attending-surgeon at San Francisco, California.

Spenser, William C., Major and Surgeon.—From Department of Dakota to Department of the East.

Goddard, Charles E., Major and Surgeon.—To be relieved from duty at Jefferson Barracks, Missouri, and to report for duty in Department of Dakota.

McClellan, Ely, Major and Surgeon.—From Department of the East to duty at Cavalry Depot, Jefferson Barracks, Missouri.
S. O. 242, A. G. O., October 15, 1884.

McKee, James C., Major and Surgeon.—Granted leave of absence for one month, with permission to apply at division headquarters for one month's extension. Paragraph 1, S. O. 149, Department of Colorado, October 3, 1884.

Alden, Charles H., Major and Surgeon.—Relieved from duty at Fort Yates, Dakota Territory, and ordered for duty at Fort Snelling, Minnesota. S. O. 125, Department of Dakota, October 20, 1884.

Wolverton, W. D., Major and Surgeon.—Granted one month's leave of absence, to take effect when his services can be spared by his post commander. Paragraph 4, S. O. 211, Department of the East, October 16, 1884.

Vickery, R. S., Major and Surgeon.—During temporary absence of Major J. C. McKee, Surgeon, U.S.A., Medical Director of the Department, in addition to his other duties, will assume charge of the office of the Medical Director. G. O. 34, Headquarters Department of Colorado, October 8, 1884.

Winne, C. K., Captain and Assistant-Surgeon.—In addition to his duties as post surgeon at Benicia Barracks, will also attend the sick at Benicia Arsenal, California. S. O. 122, Headquarters Department of California, October 13, 1884.

Havard, Valery, Captain and Assistant-Surgeon.—Assigned to temporary duty at Fort Schuyler, New York Harbor, New York. Paragraph 2, S. O. 211, Department of the East, October 16, 1884.

Porter, J. Y., Captain and Assistant-Surgeon.—Granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department. Paragraph 3, S. O. 138, Headquarters Department of Texas, October 9, 1884. Confirms telegraphic order of same date.

Strong, Norton, First-Lieutenant and Assistant-Surgeon.—Assigned to duty at Fort Union, New Mexico. S. O. 198, Department of Missouri, October 4, 1884.

Phillips, John L., First-Lieutenant and Assistant-Surgeon.—Transferred from Department of the East to Department of Dakota. S. O. 245, A. G. O., October 18, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM OCTOBER 12, 1884, *TO OCTOBER* 25, 1884.

Surgeon George R. Brush, to temporary duty at the Naval Laboratory, October 11, 1884.

Medical Inspector Charles H. Burbank, detached from the "Brooklyn," and placed on waiting orders, October 15, 1884.

Surgeon John H. Clark, detached from the "Lackawanna," and detailed as fleet-surgeon of the Pacific station, October 17, 1884.

Surgeon George H. Cooke, to the "Lackawanna," October 17, 1884.

P. A. Surgeon John M. Edgar, to the Receiving-Ship "Franklin," October 11, 1884.

Medical Inspector A. Hudson, detached from the "Lancaster," and placed on waiting orders, October 14, 1884.

Surgeon Joseph Hugg, placed on waiting orders, October 13, 1884.

P. A. Surgeon P. A. Lovering, detached from the "Lackawanna," and placed on waiting orders, October 17, 1884.

P. A. Surgeon F. H. Marsteller, detached from the "Monongahela" and ordered to the "Lackawanna," October 17, 1884.

Assistant Surgeon William Martin, detached from the "Passaic," and placed on waiting orders, October 14, 1884.

P. A. Surgeon H. M. Martin, detached from the "Brooklyn," and placed on waiting orders.

Delavan Bloodgood, promoted to the grade of Medical Director, August 22, 1884.

Aaron S. Oberly, promoted to the grade of Medical Inspector, March 28, 1884.

Henry M. Wells, promoted to the grade of Medical Inspector, August 22, 1884.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 15, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON MODERN METHODS OF TREATING PULMONARY PHTHISIS, AND WHAT WE SHOULD EXPECT FROM THEM.

Being an Abstract of a Lecture delivered at the Bellevue Hospital Medical College, October 28, 1884,

BY BEVERLEY ROBINSON, M.D.

GENTLEMEN,—You will remember that at my last lecture I told you that in many forms of stomachal disease, but particularly in atonic dyspepsia accompanied by marked fermentative changes in the ingesta, I had found, when other methods failed, the use of lavage by means of the soft-rubber tube a most valuable operation; indeed, I said, when the *hot-water* treatment was insufficient, it was the only plan to follow. I spoke to you of several cases in my experience which strengthened my statement, and I referred you to others with which I was familiar. I am glad to bring before you to-day a young man who is at present in my service at St. Luke's Hospital, and whose experience is amply sufficient to show the marked beneficial effects obtainable from daily washings. This young man states, as you have just heard, that he was formerly a very robust lad. After an acute affection, from which he suffered some months ago, he was attacked with severe acute dyspepsia. In fact, this symptom became so aggravated that he could digest no kind of food. Even peptonized milk would lie as a weight in his stomach, and frequently was rejected some time after being swallowed. Under these conditions daily washing-out of the stomach with warm water and borax (℥ss–Oij) was begun. Very soon he improved notably. His appetite was better, his strength increased, and in a week or two he was able to digest with ease certain light articles of diet. At this date he is no longer under active treatment with the œsophageal tube, and can digest roast or broiled meats, soups, milk, and bread, but cannot as yet digest vegetables. The number of successive lavages required to produce this result was seventy-seven.

This patient has acquired great facility in the introduction of the stomach-tube, and will now show you how readily he accomplishes this little feat. Please notice, as he pushes the soft-rubber tube backward and downward slowly, or again quite rapidly, he makes continual efforts at deglutition, and also breathes at a normal frequency. Now that the tube is in the stomach, you see that he is not apparently uncomfortable; it does not excite vomiting, or even nausea, and he can reply to any question, if addressed to him, without special effort. In order to show you how such a patient may be fed, I shall pour down the funnel and connecting rubber tubing a certain amount of this milk-and-egg, which was brought here at my request by one of the other patients, who is suffering from localized pain and dysphagia, due to advanced laryngeal phthisis. You see, our man takes his milk-and-egg very quietly, and I could go on perfectly well and pour into his stomach the entire contents of this pitcher, and probably do so with satisfaction to him. As it is, the demonstration is entirely satisfactory, and I now proceed to the subject of my lecture of to-day, which shall be mainly in regard to what I shall designate as "Modern Methods of Treating Pulmonary Phthisis, and what we should expect from them."

First, however, allow me to direct your attention for a few moments to the poor fellow who sits here. This man came to see me the other day, complaining chiefly of dysphagia and pain in his throat. The difficulty of deglutition does not exist to any very marked degree for liquids, but for solids it is extreme. Indeed, for more than six months he has swallowed little or no solid food, so that at present his appearance is that of excessive emaciation and weakness. His dysphagia is due, first, to the fact that the alimentary bolus in passing the larynx appears to go the wrong way, and the effort to swallow is followed immediately by a severe paroxysm of cough, and by rejection of food by mouth and nose. Occasionally, when food has evidently entered the larynx, he has nearly suffocated before he could free his respiratory tract from obstruction. But this is not all. The mere passage of solid food causes intense local pain, which he very much dreads, and from which he recovers slowly, and after a severe shock

to his system. Upon examination of this patient's throat, I find that he has advanced ulcerative phthisical laryngitis. The epiglottis is half eaten away, and, but for the fact that he denies syphilitic disease, shows no signs of its existence, and has evident pulmonary phthisis at its second stage in the region of the left apex, I should almost be persuaded that he had tertiary syphilis of the larynx. Further, I would add that my patient says the pain in his larynx at night is so intense that it prevents him from sleeping. Can we help him, and in what way? As a matter of fact, I find, gentlemen, he is greatly relieved from local pain by means of insufflations of a powder into his larynx of one part of tannin and two parts of iodoform; but I doubt very much whether these insufflations will do more than alleviate his sufferings for a time, unless we assist him to eat more nutritious food and in larger quantities. Here, if ever, there is a case for super-alimentation, and with the aid of the soft-rubber œsophageal tube (gavage). He should begin with a pint of milk, three raw eggs, and Reed & Carnrick's beef peptonoids, in ounce doses, poured into his stomach twice or three times a day. So soon as his stomach will bear more at any one feeding, it should be given more. When I recommend beef peptonoids I do not recommend what is best, for the powdered meat of Favrot,* according to Millard, is, doubtless, superior. This preparation, therefore, if procurable, should first be asked for, and if it cannot be obtained, then the beef peptonoids may be substituted as the next best and most suitable form of meat and gluten that we can use. Of course, the employment of super-alimentation does not interdict the use of the powder locally, nor does it absolve us from the duty, so soon as we can, of employing all other means, medicinal and hygienic, to cure our patient if possible. But bear in mind one very important fact, gentlemen, and over and beyond all theories in regard to the parasitic cause of tubercular disease of the lungs or larynx, that in most of these cases we have abundant proof of malnutrition and wasting. Do whatever else you choose and can, but first give your patients sufficient food to more than neutralize all waste or inanition. Some of these patients eat fairly well, have a tolerable appetite, but do not take *enough*. Give them more abundantly. Sometimes they can be persuaded to take large quantities of food for a while,—more than their appetite demands,—but soon food taken in this way disgusts even the best disposed and most yielding patient, and he finally declines to submit further. Then is the time to advocate strongly the use of the œsophageal tube for purposes of alimentation. Explain to him that lack of appetite, or repugnance to food when swallowed voluntarily, is no proof that large quantities, if introduced mechanically, cannot be thoroughly digested and assimilated. Numerous facts prove the contrary. You have only to read the remarkable histories first recorded by Debove and Dujardin-Beaumetz, and since verified, corroborated, and amplified by Dr. Millard, of this city, to be assured that super-alimentation is possible in patients who have at first the most pronounced aversion for food.

Further, what results can we obtain if we persist in thus feeding phthisical patients? The most remarkable and satisfactory. Many cases, of undoubted authenticity, have been published already, in which advanced cases of pulmonary phthisis have been permanently cured, thanks to super-alimentation, in this manner, continued without interruption during a series of months. Physical evidences even of softening at the apices have disappeared entirely, and all rational symptoms, such as hectic, night-sweats, elevated temperature, cough, dyspnœa, profuse expectoration, repeated hæmoptyses, have been completely suppressed for a period of time sufficient to guarantee complete recovery.

In addition to super-alimentation, I would urge the utility of continuous inhalation of dry vapors of certain volatile substances, such as creasote, carbolic acid, turpentine, iodine, eucalyptus, and benzoin. Since Curschmann, Roberts, Yeo, Pepper, and others have spoken favorably of these inhalations, I have made quite extensive use of them in both hospital and private practice. Judging by my own experience, I cannot believe that these inhalations are able by themselves to effect very considerable reparative changes in larynges or lungs already far advanced in

* This preparation has been imported by E. Fougera & Co., New York City.

phthisical lesions. I am quite confident, however, that they often lessen very much the frequency and intensity of cough, deodorize and diminish somewhat the quantity of sputa, and give considerable relief at times to painful sensations, both in the throat and chest, of such patients. I have shown you at a previous lecture the forms of inhalers I employ. The first kind is made of two perforated metal plates held together by a spring-catch, and between the plates a layer of oakum or absorbent cotton is placed, upon which a sufficient quantity of the volatile liquid is poured. They are held in place over the mouth by means of two elastic loops, which are passed around the ears. This form of inhaler is sold in this city by Mr. Ford, and was first introduced to the profession, I believe, by Dr. F. P. Kinnicutt. The other form, which I consider preferable, although much cheaper, was imported by me for use in the out-patient department of the New York Hospital. It is composed of a single piece of perforated light metal somewhat pyramidal in shape, and having attached at the apex of the pyramid a small piece of sponge, which, after moistening with water, should contain the volatile liquid. These inhalers can be worn during several hours each day without occasioning much annoyance, and with very decided relief to many distressing symptoms. They are unquestionably far superior to all other kinds of inhalers hitherto brought into use. They never give fresh attacks of cold, as I have frequently found with the warm-vapor inhalations was the case. They are very portable, readily put on and taken off, and their cost is moderate. The undiluted dry vapors, when inspired, probably reach as far down the respiratory tract as any atomized fluid from the numerous spray producers in the market, and appear to me in every way preferable to them.

This other patient whom you see is affected with pulmonary phthisis, which has reached the stage of softening at the left apex. He has no laryngeal complication, and yet he has most distressing and obstinate cough. To combat this symptom all ordinary means have been exhausted, and without giving even temporary relief. One week ago I injected ten minims of dilute Lugol's solution into the second left intercostal space, in a vertical line with the left nipple, and to the depth of one and one-half inches. The effect of this injection was to lessen his cough very much, and to make, as he states, his breathing somewhat easier. To-day I shall repeat this injection over the same region, and you will note the immediate result. It causes, as you perceive, but little pain, and, although the man coughs a few times immediately after the injection, and expectorates some thick, yellow phlegm, the sputa are not even tinged with blood. This is not always true, for in a few instances, after making similar injections, there has been slight hæmoptysis. I have thus far made about seventeen or eighteen of these intra-pulmonary injections, and with satisfactory results, so far as the cough and dyspnœa are concerned. The patients, in two or three instances, have affirmed that the quantity of sputa had also lessened. As yet, I have not followed up any one case long enough to know what definite results I shall obtain with respect to the pulmonary lesion itself.

In this country we owe this method to the personal initiative of the distinguished professor of practice at the University of Pennsylvania, Dr. William Pepper. In all, Dr. Pepper has performed more than two hundred intra-pulmonary injections, and has never had, so far as I know, one disastrous result. In fact, only on one occasion did he have a hemorrhage following the injection which appeared grave at the time. Even this hemorrhage seemed to be due to the suction caused by a considerable vacuum in the pump of Dieulafoy's aspirator. Dr. Pepper has given the first intercostal spaces as the proper places on the anterior chest-wall to make these injections. From my own investigations in the dead-house, I incline to the belief that the upper portion of the inner axillary region will be ultimately found to be the most direct way of reaching the cavities situated at the apices. To be frank, however, I should state that on two occasions, when I made injections at this spot, I had some bloody sputa follow the little operation.

What may we hope from intra-pulmonary injections? In my belief, they will disinfect the contents of lung-cavities; they will modify and diminish the secretions from the walls of these cavities; they will tend to effect cicatrization and contraction of these spaces, usually filled

with a material which is a constant source of peril to the patient. I have not been convinced of the advantage to the patient, when bearer of a phthisical cavity, of a free opening through the chest-wall and complete drainage of it. But this is a very different matter from the operation you have just seen, which may be repeated again and again without risk or shock to the patient, and which promises well to the sufferer, if he has the faith to hold out until the good results are noted.

I have endeavored in this lecture, gentlemen, to give you a slight *aperçu* of what I consider real advances in the treatment of pulmonary phthisis. We all know what treatment by the old methods means for the vast number of unfortunate beings who crowd our city dispensaries. With the three methods advocated by me before you this day,—viz., super-alimentation, continuous dry inhalation, intra-pulmonary injections,—many patients will yet be saved who, with cod-liver oil and the hypophosphites alone, or added to the other resources usually employed, would most certainly die. Nothing prevents us from using all previous means to help our phthisical sufferers, but I would also make a very urgent plea for the plan you have seen me practise before you.

ORIGINAL COMMUNICATIONS.

THE TRADE-ASPECT OF MEDICINE.

BY ALBERT L. GIHON, A.M., M.D.,

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Read before the Academy of Medicine, and Recommended for Publication.

"THAT was a fearful experience you had in that typhoon in the Japan Sea," once remarked a very dear and very eminent friend, whose memory I revere, "but I almost wish you had been drowned;" and when I inquired why he would I had had such a doleful ending, with a merry twinkle of his eye, he added, "Because you would not have written that paper proclaiming the deplorable degree of ignorance in the medical profession." "Is it not all true?" I queried; and he answered, "Ay! that's the mischief of it; it is all too true. The fact is, the shiftless city pilled-garlick, or the country leech whom you see sitting in front of his rude shanty like the monthly nurse and village blacksmith, only plies his trade." And these words he spoke seriously, sadly, despondingly.

Let us look facts squarely in the face. Are there in our ranks, ninety thousand strong, mechanic surgeons, men midwives, and tradesmen doctors? and, if so, have they a right to the honors and consideration that pertain to the other members of the profession of medicine? If not,—and assuredly they have not,—how can the fact be made patent that they are only camp-followers, and not of the rank and file of a noble army of men enlisted, organized, and drilled to serve a great and glorious cause?

One does not have to go into country towns or sparsely-settled wilds to find the medical tradesman's sign. A very short time ago a leading medical journal, itself a foremost advocate of all that is elevating and ennobling in medicine, published a communication from an M.D., who was not even ashamed to append his name to the degree, bewailing that certain medical officers of the army had treated sick people in his neighborhood, and therefore, inferentially, deprived him of a possible fee. That the element of special locality and personality may be eliminated, I right-off plead guilty, as a medical officer of the navy, to the same offence, and further admit I know of many others, in both services, who have done and propose again to do likewise, whenever they can relieve suffering, restore health, or, in any other way within their power, benefit a human creature or an afflicted brute. The wail of this complaint might therefore be allowed to pass unheeded, but that it serves to illustrate the tradesman's spirit which has been engrafted upon a noble stock, which it threatens to overrule and cause to bear only its own unsavory fruit. He writes as he feels, and he feels as the corner grocer whose gall is stirred because some other vender, who has offered better or more tempting wares, has cut down his own sales. The advertising insignia and artifices, the gold-headed badge of office, the borrowed clerical necktie, the pompous air, the insinuated advice, the covert innuendo, have, perchance, failed to lure patrons to the shop where calomel and quinine are retailed instead of soap and molasses. He denounces "the unfair

competition" (and competition is the soul of trade), "because," he alleges, "the army surgeon is backed by an assured salary. The office he occupies and the horse and buggy he uses are in part paid for by the very physicians against whom he comes in competition. To the military medical mind this may seem fair and honorable; to the civilian, however, it certainly does not;"* and from the tradesman's point of view it is mean, I admit, to borrow the sounding-gong of your rival's milk-wagon and make him help pay besides for hawking your wares.

It does not mend the matter if this army-interloper makes no charge for his services; that aggravates the offence, for the medical tradesman profoundly detests charity and charities. The public dispensaries, hospitals, and lying-in asylums, the college clinics and their out-door poor-service, are regarded by him with the same disfavor that the old-time operative entertained for the thing that was moved by steam and did the work of a hundred clumsy, horny hands. Not that the new net catches more fish than he could even hope with his hook and line, but that it scoops in some gudgeon which might perchance have bitten his bait. Little recks he that the half-starved widow pays with her blood for his questionable advice and more than useless dose. The mantle of charity that would shield her and her puny children might envelop some parsimonious invalid who could afford to pay.

But charity is not the weightiest obstacle to success in medical trade. That may thin the crop, but as nothing in comparison with the blight called sanitary reform, which even medical men are fomenting. The tradesman's soul is sore as he sees the thistles on which he has fed uprooted from the fields where he has browsed. You will not find him at hygienic congresses, nor sitting on State boards of health, cheek by jowl with homœopaths and eclectics and other hated heretics and schismatics; nor leading sanitary associations, sanitary councils, or sanitary conferences; for, to his mind, it is downright folly to choke up the source whence lucre flows, though, to him, never but in a shallow stream. Sections in State medicine do not delude him with the borrowed plumage of their names, for what "medicine" is there in them or in that synonymous incongruity, *preventive medicine*, that should interest a man who wants to know the last gynæcological wonder, the latest way to cure bleeding piles or dumb ague, or the most recent novelties in elixirs and pessaries? Who would prevent venereal diseases, who knows the golden prospect from a protracted gonorrhœa, an obstinate stricture, a chain of suppurating buboes, or a crop of mucous patches? He can never have heard the crackle of a crisp greenback, who would advocate certified hospitals for the gratuitous treatment of these unfortunates,—vile, debauched, and prostitute though they be; for the most sanctimonious prater that the ways in which Divine Providence chastises sin should not be interfered with by man does not refuse to pocket the sinner's fee who objects to the chastisement.

A very little leaven affects the mass. Imbued with the tradesman's spirit, medical societies—some only, not all—have insensibly become little else than trades-unions, and, assembling ostensibly for professional improvement and the greater glory of the science of medicine, they make their shibboleth the criterion of professional fellowship. I foresee that this may be echoed back as a charge against this Academy; but the medical trades-union is not a lodge of masters of the craft, but a mere coterie of men who have learned by rote a creed they need not even understand so long as they swear by it. This, with a hieroglyphic M.D. on parchment, as unintelligible to the owner as his Latinized name done in German text is irrecognizable by him, entitles him to enter the most holy place, where all sit on the same level worshipping the same unknown God.

It is the huckster's trick to hide under the cloak of his reputable neighbor, that the latter may share the blow intended for the other. Anticipating, therefore, the charge that I am inveighing against medical societies indiscriminately, I desire to emphasize that I refer only to those bodies whose members are banded together after the fashion of mechanics' unions, by fee-bills prescribing how much shall be charged for administering a dose of castor-oil, dressing a sore, and extracting a baby, or rather watching a baby extract itself, and by formulized rules of behavior, rather than by that innate sense of honor and that rectitude of purpose, the outcome of

* The Medical Record, vol. xxvi. No. 3, p. 83.

culture, refinement, and education, which ought to characterize every reputable man who claims to be *doctus in medicinâ*.

Unfortunately, the degradation of our great science has not been retarded by its development. While in every country, and here as prominently as anywhere in the world, investigators are reaching one headland after another in unknown seas, and clearing away the undergrowth of ignorance that covers new lands for cultivation, the sciolist and charlatan still jabber their scanty jargon and display their rule-of-thumb methods. Is the profession bound to accept this rabble as part of it, or shall it repudiate them as unworthy its honor and dignities?

It is a fact that attempts at exclusion of this rag-tag and bob-tail—by requiring tickets of admission, certificates of qualification, testimonials of merit, to be presented at the gate of the temple—have failed of their purpose. Tickets are begged, borrowed, or stolen; certificates are forged; testimonials are wheedled from some benevolent master who cannot say "No." It is well enough to proclaim that a proper degree of medical intelligence shall be a requisite, and to insist upon preliminary academic training and systematic instruction in medical philosophy before mere medical handiwork. A few schools have undertaken this, but there are ninety-and-nine others which still grind out their smatterers to recruit the tribe of empiric tradesmen. State Boards of Medical Examiners, not trammelled by school affiliations and predilections, attempt, in some States, to arrest the overflow from unscrupulous college-mills; but their sieves are coarse, and only the rougher cobbles are arrested, and the stream that flows by is still a muddy one. A third barrier has been sought in medical societies, but, although some of these have boards of censors, who rigorously scrutinize every candidate's qualifications, others, as I have intimated, have taken their hue from the majority, and themselves become not much better than trades-unions. Shall, then, fellowship in this Academy be the *sine qua non* of professional reputableness? While I believe there are none here who have not won their spurs, there are too many *preux chevaliers* in the ranks for us ever to hope to have them wear our colors. I do not pretend that the mere possession of one degree more than another is a guarantee of competence, though the academic grades in Belles-Lettres and the liberal arts do mean something more than the empty pretentiousness of the more sonorous doctorate; neither will the additional brand of Oxon., Cantab., Harv., Y.C., U.P., A.M.C., or C.P.S.N.Y. serve any better to distinguish the sheep from the goats; for cultured men, graceful writers, profound thinkers, acute observers, and learned scholars are found in our profession, whom no degree can dignify, and whom no caudal alphabetics are needed to identify.

After all, the remedy is with the profession itself, and back we come to the point on the circle at which we started. Who constitute the profession? Is medicine a tri-unity of science, art, and trade? Are the scientific physician, the expert mechanician, and the plodding tradesman *fratres nobiles*, or are they distinct and demarcated by well-defined lines,—not metamorphosing one into the other like larva, pupa, and imago, but separable vocations? I begin to believe this inevitable. I have elsewhere ventured to suggest that the medical neophyte shall receive the degree of M.B. on leaving college, the statelier degree of M.D. being reserved for those who have proved themselves worthy of it. But if all colleges will not exact a literary preparative; if they will not graduate only bachelors, and reserve the doctorate for those of riper years, wider experience, and profounder research; if licenses to practise cannot be limited to the properly-qualified; if medical societies will not rigorously exclude every illiterate, ignorant, and incompetent applicant; if a sentimental objection exists in this free country to the doctrine that one man is not as good as another in medicine as in anything else, no matter whether he knows anything about it or not;—then the only thing left is for those who are content to stand on the tradesman's level to stand there for aye. But let those who look upon medicine as something else than a traffic in human misery, a means of self-aggrandizement at the expense of human suffering, have the courage of their convictions, and stand apart.

Is it arrogant and vainglorious assumption for you and me to refuse to recognize as a professional compeer a man who, having accepted the position of apothecary

in a public institution, protested he could not find any muriatic acid in the dispensary, with the bottle labelled "Acidum Hydrochloricum" staring him in the face, and showed his familiarity with the metric system by equivalencing grammes with grains; or that other who, not two months ago, signed a letter stating that he and a consulting friend, who had been called to a case of unmistakable suicidal narcosis, had not thought it their province to attempt any treatment in the absence of his official superior, and for six hours sat by and saw him sleep into death,—an instance parallel with one that occurred to me, some years ago, in consultation over an opium suicide, when the attending physician had been some hours trying to persuade the recalcitrant patient to take something, until the latter became too drowsy to argue longer? Must we take them by the hand and sit in solemn, owlish conclave with such men because they can flourish their regular M.D.? Then what should we do with that other who prescribed for a lady in Philadelphia—

℞ Sulph. quiniæ, gr. xx;
Strychniæ, gr. i;
Acidi sulphuric. F., 2½ oz.;
S. Coch. parv. (a teaspoonful) 4 times daily;

and was only saved from killing her and adding torture to the act of dissolution by the greater wisdom of the apothecary to whom it was sent to be compounded?

Who of you, whose wife and child go to a strange place, does not feel a greater dread of the unknown doctor than of the unforeseen disease they may encounter? There was comparative safety so long as the village medical bumpkin treated dyspepsy, wind-colic, and yaller janders with calomel and jalap or black draught; you had the satisfaction of knowing that the thing did not stay in you; but now that the great manufacturing drug firms are sending their pretty pink-and-white confectionery into every doctor-shop, however humble, you do not know what mighty and mysterious alkaloid may find its way into your penetralia to stay.

And this brings me to a very good starting-point in our proposed reform, by suggesting that there are beams in our own eyes that may profitably be removed. It may involve considerable sacrifice of personal consequence and some self-abasement to admit frankly that we do not know everything, that we cannot cure every disease, that there are problems in therapeutics we cannot solve off-hand, and in many instances we do not really know what the matter is, and that, despite the elegant polypharmacy of the day, we do not know what thing it is right to give. This will distinguish at once the physician of culture from the men who know everything and can cure anything, from cancer to the itch.

If, however, medical men are to be honest and say, "There is nothing the matter with you; you do not need any medicine," or, "I do not know what is the matter, and I will give you nothing until I do;" if benevolence and charity are to make them refuse the fee the poor woman and child cannot afford to pay, and they are to say, "Keep it to buy bread; you want no drugs;" if the exuberant growth of the Pharmacopœia is to be pruned down, and a warm bath and rest in a clean bed and quiet room, or exercise in the fresh air and sunshine and substantial food, are to be the routine prescriptions, and a few potent drugs are to be used, like surgeons' knives, only when we know where and with what to cut;—if all this be done, how can men who have made medicine their vocation expect to live?

In the first place, a higher standard, educational and professional, would greatly reduce the number of applicants for this calling, and the graduate would, in the second place, not, as now, have to hang out his sign and wait for the patients chance might throw in his path, but begin his career in some of the hospitals, dispensaries, and eleemosynary institutions, which should be multiplied until every sufferer too poor to pay can receive gratuitous attendance. But while the patients at such establishments ought not to pay, the medical officers attached to them ought to be well paid; and this is where and how I would have every young physician begin his professional life,—in the receipt of an "assured salary," an income sufficient to enable him to live honestly and reputably, which is all the army medical officer can boast whose officious intermeddling in the cause of suffering humanity has so excited the ire of his neighbor tradesman.

In recent years the practitioner who, from special aptitude or preference, who, having a soft, pliant hand and sensitive touch, or an ear recognizing shades of

tone in the rushing currents of blood and air, has limited his work to special classes of disease, has been looked at askance by many in the profession, as treading exceedingly close to the border-pale of recognition, and the little private hospital or dispensary he establishes, where the poor come for relief and his pupils cluster to learn, is denounced as an encroachment upon the field of general practice on which the young physician is to find subsistence. But why should not the wretched poor have the benefit of the highest medical skill and knowledge as well as the wealthy parvenu, who hires his doctor, however renowned, in the same spirit as he hires a coachman? What man owning a complex, intricate machine would intrust its repair to a novice in mechanics? Which of you will take his Jorgensen to the watchmaker who repairs his kitchen-clock? Why, then, place this human body—the most complex, intricate, and least understood of any mechanism ever devised—at the hap-hazard of some tyro in medicine? Which one of us does not shudder when he looks far back into his youth and recalls how blindly and recklessly he assumed the solemn responsibilities of this greatest and grandest of men's callings?

Let us, then, multiply and encourage the special wards and dispensaries until there shall be cliniques for eyes, ears, throats, lungs, and hearts; for skin, nerves, limbs, and abdomen; for venereal diseases and cancerous diseases; for consumptives, for paralytics, for the poor and the maimed, and the halt and the blind; and if there is not public spirit in the State to support these charities, then appeal to the churches in concert to assure the task, and undertake the great mission-work of making the blind see, the lame walk, and the dying revive. In this work medicine and religion can labor on common ground. There is no other avenue to the soul than through the body, and they who would care for the former must see that its earthly tenement is undefiled. Church sanitary work of the broad, unsectarian character I suggest would have this other result,—of making known the needy as well as the afflicted, the poor to whom food and drink will be wonder-working medicine. The light of medical knowledge makes many a hidden sorrow visible, and the doctor whose soul is not eclipsed by the round disk of a silver dollar looks upon the wan faces and flaccid limbs of the ill-fed and under-fed women and children he everywhere encounters as sadly as if they were seared by cancer or racked by phthisis.

The multiplication of endowed hospitals, asylums, infirmaries, dispensaries, and cliniques for treatment of the poor, whose necessities are properly certified by sanitary officials, magistrates, or church authorities, and of private hospitals and sanitariums for the rich, who can afford to pay, would give employment to a very large number of medical men, the older as guides and instructors, the younger as students and workers,—all equitably remunerated. Not only would they serve the people who now fly to every nostrum and panacea, but return a medical harvest, in the shape of exact statistics of disease, —now meagre and unsatisfactory. Every charitable institution would be a school of experimental medicine, in its justifiable sense, under the supervision of the highest medical authorities.

But there is a wider, equally useful, and just as necessary field for medical skill and intelligence in the still-to-be-established municipal sanitary service. Communities some day are bound to discover that prevention is cheaper than cure, and sanitary inspectors are bound to be in demand.

The Medical Record of August 9 very properly contests the assumption of *The Sanitary News*, "that the most efficient and reasonable sanitary work is accomplished by men outside the medical profession," and pertinently asks, "Will not our excellent contemporary *The News* now publish some letter from A Plumber to a Young Doctor, for example, telling him how to avoid typhoid fever, cholera, smallpox, etc.?" The popular idea of the physician as a cormorant of fees is speakingly illustrated when a journal of the high literary and scientific character of *The Sanitary News* editorially says, "The really useful and valuable sanitary work which conserves the public health is done by these same 'perpetrating' architects and by plumbers, when they design and execute those measures which *cheat the physician out of his bill* by preventing the causation of disease." Happily, the profession vindicates itself. The ablest, most zealous, most enlightened advocates of sanitary reform are themselves able, zealous, and enlightened physicians. The

time is not distant when sanitary inspectors will be demanded in every city, town, and hamlet. They should be found at every railway-station, and at every mercantile entrepôt, and every factory and market-place, at every school and church and theatre, and overseeing every dairy, bakery, butcher's stall, and grocer's shop; and ninety thousand physicians can have no better or more appropriate and honorable employment than enlisted in such service. There is not a city in this country in which to-day the fines for violations of even existing health-regulations would not more than suffice to defray the expenses of a well-remunerated sanitary establishment, and an efficient sanitary service cannot be a cheap one, nor ought the attempt to be made to conduct it on a parsimonious plan. Competent inspectors can only be secured and interested in their work by receiving adequately compensative salaries. In my opinion, too, the dignity of the office of the family physician would be enhanced if he likewise were salaried and paid as the sanitary adviser and counsel of each household, his income being determined by the size of his clientage, and not by the fortuitous occurrence of a case of typhoid, or an epidemic of measles, welcomed for their greater money value.

The poor provided for; the young practitioners serving at hospitals, dispensaries, and cliniques; the mass of the profession doing honorable, legitimate yeoman service in caring for the health of the community, there will be left ample employment for the elders,—the experienced physician, the skilful surgeon and accoucheur, the dexterous special operator,—to whom naturally will fall those greater rewards to which greater ability and larger practical acquaintance justly entitle them.

There is truth enough in medicine for us to eliminate humbug and leave it to the quack, who will thrive as long as credulity is an element of human nature. We need no alchemic parade of many-thousand-paged dispensatories; a modest volume will hold our therapeutics. Let our quartos be for the facts of anatomy and biology. The natural history of man is not all unfolded; the natural history of disease in its myriad protean forms to be yet written will fill more tomes than one can write or generations read. There are laurel wreaths for the investigators,—who will make disease impossible,—which they can wear without blushing, as he must who hears himself lauded for marvellous cures to which he knows he has no title. Let the trader in cure-alls sound his wares in the illegitimate fashion of the undisguised quack or by the legitimate method of the regular charlatan. The nurse, the midwife, the prescribing apothecary, the cow-leech, and the corn-doctor, are petty tradesmen of the same calibre with them. Let us repudiate the assumption that a shrewd knowledge of the sick-room is all that is required to make a doctor in medicine, and insist upon our claim that there is no intelligence too bright, no application too profound, no industry too severe, to be devoted to the study of medicine, in which, as Professor Young said at Philadelphia of the study of the heavens, "the human intellect finds most invigorating exercise and most nourishing and growth-making aliment." To those who would give it narrower scope let us be able to respond, "Not of that ilk."

In the republic of letters every scrivener is not a senator, but the *aristoi* wear their laurels neither by birthright nor by letters-patent. Why should any dolt and ignoramus be veneered by a piece of cabalistic sheepskin into a doctor in medicine? If it be undemocratic in this country, where theoretically all men are born free and equal, to recognize impassable classes of practitioners, as in England; or if a baccalaureate probation cannot be exacted of every graduate before he has a right to wear the doctor's toga; if societies will not refuse fellowship to the illiterate possessor of a diploma, who has neither the ability nor ambition to rise in his vocation above the tradesman's level, let us at least proclaim our belief that there is a higher medicine than leech-craft, and uphold its honor and dignity by not countenancing, by act or word, those who have had part in its degradation.

PRESENCE OF BACILLI LEPRÆ IN ANÆSTHETIC LEPROSY.—Dr. Arning, at present in Honolulu (*Virchow's Archiv*, vol. xcvii., 1884), excised portions of the ulnar nerve in two cases of pure anæsthetic leprosy, and found bacilli lepræ in the connective tissue between the nerve-fibres. This is the first time that the presence of bacilli in the pure anæsthetic form has been demonstrated.—*London Medical Record.*

REPORT ON MEDICAL CHEMISTRY.

BY WM. H. GREENE, M.D.

CHEMISTRY OF THE URINE.

THE FERMENTATION METHOD for the estimation of glucose in urine has been made the subject of a careful study by Worm Müller, in conjunction with J. Hagen, who recommend a titration with Knapp's solution before and after the addition of yeast. The difference in the results is capable of indicating a proportion of glucose as small as 0.05 per cent. The reduction which takes place after fermentation is due to reducing agents other than glucose, and cannot be neglected in urine containing only 0.04 to 0.05 per cent. of glucose. Besides this, a small quantity of the glucose, equivalent to 0.01 to 0.02 per cent. of the total proportion present, is destroyed by the yeast.

ROBERTS'S METHOD for the estimation of glucose, by the difference in density before and after fermentation, answers well for urine rich in glucose, but is untrustworthy when the proportion is below 0.5 per cent. In normal urine to which a known quantity of glucose has been added the results obtained are always too high when the difference in specific gravity is multiplied by Roberts's factor (.001 difference = 0.23 per cent. glucose) or Manassein's factor (.001 difference = 0.219 per cent.). Fermented diabetic urine has a lower specific gravity than would result from the fermentation of the glucose. On the contrary, urine containing but little glucose often gives too low results by Roberts's method.

A MODIFICATION OF THE METHOD FOR THE DETECTION OF GLUCOSE BY FEHLING'S SOLUTION has been proposed by George Buchner. In many specimens of urine containing glucose, heating with Fehling's solution produces only an opalescent yellowish-red coloration, and no red precipitate of cuprous oxide is formed. This result is exceedingly unsatisfactory, as the presence of glucose then appears doubtful. In such cases the urine should be treated with an excess of cupric sulphate solution (one to ten), and heated to boiling. A grayish-green precipitate then separates, and is separated by filtration after the liquid has cooled. On now adding a solution of potassium hydrate or some Fehling's liquid to the filtrate, an azure blue color is produced, and red cuprous oxide separates on boiling, even when the urine contains only a minimum proportion of glucose. In all cases in which the ordinary application of the test, as well as successive additions of cupric sulphate in alkaline solution, gave ambiguous results, G. Buchner obtained by his method the most decisive glucose reaction. The previous separation of creatinin by zinc chloride is troublesome and wastes time; the first addition of the copper sulphate solution causes the separation of uric and phosphoric acids, and removes the creatinin by which the reduction of the cupric oxide by glucose is impeded.

POTASSIUM CRESOLSULPHATE has been obtained by L. Brieger from fresh urine. This substance was precipitated first with neutral and then with basic lead acetate, and filtered; the filtrate was freed from lead by hydrogen sulphide, evaporated on a water-bath, and placed in a vacuum. The crystals which separated after a time were recrystallized from hot absolute alcohol, and identified as the before-named salt.

A NEW REAGENT for the examination of urine has been proposed by P. Ehrlich. It is a very dilute solution of *paradiazobenzolsulphonic acid*, which may be first prepared in the crystallized state and dissolved in water, or can be produced in the test-liquid by adding a few fragments of sodium nitrite to an aqueous solution of sulphanilic acid acidulated with from six to ten per cent. of pure nitric acid.

When normal urine is treated with this reagent there is only a faint change of color, and it is altered to orange by the addition of ammonia or potassium hydrate. In certain diseases, on the contrary, the reagent causes the urine to assume a carmine or purple-red color, the shade of which can be readily appreciated by an examination of the froth formed after the liquid has been shaken. This reaction has been observed in pulmonary phthisis, and constantly in typhoid and scarlet fevers. It is rarely produced by the urine of patients suffering from pneumonia or diphtheria.

The coloration is probably caused by pyrocatechin and other phenolic compounds which may be present in the urine, but F. Penzold has recently shown that the paradiazobenzolsulphonic acid reagent may be colored red by many other bodies in presence of alkalies. Among these are acetone, lactose, saccharose, and glucose.

Ptomaines or Analogous Compounds have been obtained from urine, as well as from other products of the organism, fresh and putrefied, by A. G. Pouchet. By precipitation with tannin and dialysis, these products were classified as non-dialysable liquids and readily dialysable crystals. The liquid product so obtained from urine has a composition responding to the formula $C^3H^5NO^2$; it is very alterable, and is resinified by hydrochloric acid. The crystallizable portion seems to have the composition $C^7H^{12}N^4O^2$ or $C^7H^{14}N^4O^2$, and yields a definite chloroplatinate. These products are related to the oxybetaïnes, and are quite poisonous.

Urochloralic Acid is the name given by Von Mering and Musculus to a levogyrate acid which was extracted by them, in 1875, from the urine voided after the ingestion of chloral. Richard Kulz recommends the following method for the preparation and identification of this compound. The urine is agitated with a mixture of ether, alcohol, and sulphuric acid, and the residue left on the evaporation of the extract so obtained is precipitated first with neutral and afterwards with basic lead acetate. The last precipitate is decomposed by hydrogen sulphide, and, after the lead sulphide and excess of hydrogen sulphide have been removed, is neutralized with barium hydrate, evaporated to crystallization; the barium salt is decomposed with dilute sulphuric acid, and the filtered liquid is evaporated to a syrup at a low temperature, and then dried in a desiccator; the dry mass is exhausted with hot ether, and the urochloralic acid crystallizes from the ether extract.

The Occurrence of Large Quantities of Indoxylsulphuric Acid and Skatoxylsulphuric Acid in the Urine in diabetes mellitus has been observed by J. G. Otto. In one case, in which, by Jaffe's method, considerable quantities of indigo, amounting to 0.1617 gramme per day, could be prepared from the urine, Hoppe-Seyler's modification of Baumann and Bruger's method, to ten litres of urine, enabled the separation of potassium indoxylsulphate in substance. In another case concentrated nitric acid colored the urine red, and the addition of ferric chloride produced an intense violet-red or purple color. From eleven litres of this urine 0.8 gramme of pure potassium skatoxylsulphate were obtained. The alcoholic extract of the evaporated urine was concentrated and allowed to remain in the cold until a deposit formed; this was removed, and the liquid was treated with a saturated alcoholic solution of oxalic acid and filtered. The filtrate was rendered slightly alkaline with alcoholic potassium hydrate, again filtered, and the liquid concentrated on a water-bath. The salts which separated were removed by filtration, and the evaporation continued until the residue was syrupy. This was then dissolved in warm absolute alcohol, from which the potassium skatoxylsulphate crystallized on cooling. An analysis of the substance, recrystallized from boiling alcohol, gave figures corresponding to those required by theory, and this compound is probably the skatol combination previously observed by Baumann in urine.

Peculiar Constituents in Diabetic Urine.—Hallervorden has observed increased quantities of ammonia in the urine of many cases of diabetes mellitus, and Stadelmann isolated from the urine in one such case *notable quantities of crotonic acid.** According to O. Minkowsky, however, the crotonic acid does not exist already formed in the urine, but is produced from the β-oxybutyric acid which this investigator has extracted from diabetic urine. Oxidation of this substance yields acetylacetic acid, and the existence of this substance and of the acetone, which have been noticed from time to time by various experimenters, is probably to be attributed to the previous existence of β-oxybutyric acid.

Copaiba Urine.—The urine voided after the ingestion of copaiba balsam assumes a red color on the addition of hydrochloric acid, and gives an absorption spectrum showing three bands, one of which—in the blue—disappears on the application of heat, and at the same time the fluid acquires a violet color. Bleaching-powder, as well as tincture of iodine, accelerates the reaction, which is attributed by Brix to a terpene contained in Maracaibo balsam (Gurjun balsam), and the urine excreted after its ingestion yields the same results (C. le Nobel).

Determination of Total Nitrogenized Constituents of Urine.—Th. Lehmann has investigated the application to urine of Kjeldahl's method for the deter-

* See Medical Times, vol. xiv. p. 708.

mination of the total nitrogen of animal substances. By this method the urine is evaporated with sulphuric acid, and maintained for a time at a temperature somewhat below that of the boiling-point of the acid, powdered potassium permanganate being added in small quantities. All of the nitrogen is thus converted into ammonium sulphate, and by the addition of sodium hydrate and distillation in a current of steam the ammonia is driven out and its quantity determined by any of the usual methods. Estimations by this method gave results closely corresponding to those indicated by the total urea, uric acid, hippuric acid, etc.

A Synthetical Colloid Body Closely Resembling Albumen has been obtained by E. Grimaux by the action of phosphorus pentachloride on metamidobenzoic acid. After heating the mixture for an hour, the mass is treated with boiling water until the residue becomes a white, friable powder; this is moistened with ammonia; it swells and dissolves slowly, forming a liquid which filters with difficulty. After filtration it is evaporated in vacuo; it then thickens to a diaphanous jelly, and dries to a yellowish, translucid mass, which is tasteless and odorless and closely resembles the albumen of serum. The colloid so obtained swells and dissolves slightly in cold water, but is freely soluble in hot water, and its solutions can be heated to boiling without alteration. If the liquid be evaporated on a water-bath the appearance of the residue is not different from the original substance, but it is insoluble in water. Grimaux has published a full description of the reactions of this interesting body, and the following comparison of its properties with those of albumen:

A One-Per-Cent. Solution of Albumen	*The Amidobenzoic Colloid*
Is not coagulated by boiling; becomes opalescent.	Is not coagulated by boiling; becomes clouded after a few minutes' boiling.
Is precipitated when hot by common salt, calcium sulphate, magnesium sulphate, ammonium chloride.	Identical.
Is coagulated by heat after saturation by a current of carbon dioxide.	After the addition of sodium chloride insufficient to produce coagulation, is coagulated by heat after saturation with carbon dioxide.
Is not precipitated by acetic acid.	Is precipitated by acetic acid.
Is precipitated by nitric acid in the cold.	Identical.
The precipitate is soluble in ammonia, insoluble in sodium phosphate.	Identical.
Is precipitated by tannin and salts of mercury.	Identical.
With cupric sulphate, gives a precipitate which dissolves in potassium hydrate with a violet color.	The same, but the alkaline solution is rather blue than violet.
Is still soluble in water after evaporation in vacuo.	Identical.
Is insoluble after evaporation on water-bath.	Identical.
Nitric acid colors the precipitate yellow.	Identical.
Properties of Solutions which have been Heated.	
Precipitated in the cold by acetic acid.	Identical.
The precipitate dissolves easily in an excess of acetic acid.	Precipitate dissolves with difficulty.
Precipitated in the cold by carbon dioxide.	Identical.
The precipitate formed by carbon dioxide in the cold is redissolved on passing a current of air.	Identical.
The presence of sodium phosphate prevents precipitation by carbon dioxide.	Identical.

The conclusion of Grimaux is that physiologists are in error when they assert that the substances which are of the highest importance in the functions of life, the albumines, do not present the character of chemical combinations. Contrary to such assertions, his researches prove that the albuminoid bodies owe their complex reactions to the fact that they are colloidal bodies.

N. Simanowsky and C. Schoumoff have made some experiments on *the influence of*

alcohol and morphine on physiological oxidation. They have applied, as suggested by Sieber and Nencki, the oxidation of ingested benzol to phenol as the measure of the oxidation taking place in the system. The elimination of phenol lasts from two to four days. A dog which normally excreted from 0.2831 to 0.2483 gramme of phenol for every gramme of benzol ingested, eliminated only 0.1649 gramme after the administration of 0.3 gramme of alcohol per kilogramme of weight. An increase of the alcohol to 3.1 grammes per kilo of weight reduced the phenol eliminated to 0.1256; on the contrary, the administration of 0.02 gramme of morphine hydrochloride per kilo increased the phenol to 0.309 gramme. Another dog eliminated from one gramme of benzol 0.1596 to 0.1696 gramme of phenol; after the administration of two grammes of alcohol per kilo of weight, the excretion of phenol was only 0.0772 to 0.0731 gramme, but after doses of 0.01, 0.03, and 0.04 gramme of the morphine salt per kilo, the excretion of phenol was increased to 0.2228, 0.2131, and 0.2228 gramme. In a man of twenty-seven years, after the ingestion of a little more than two grammes of alcohol per kilo of weight, the quantity of phenol eliminated from the oxidation of two grammes of benzol fell from 0.8205 to 0.3301 gramme. It seems, then, that morphine increases the oxidizing powers of the system, while they are correspondingly depressed by alcohol. Alcohol appears also to diminish the quantity of urea excreted, but the elimination of urea is no measure of the oxidation going on in the organism; constriction of the air-passages, which increases the excretion of urea, diminishes the quantity of benzol which is oxidized to phenol. In neither man nor dogs could any more than traces of the ingested alcohol be detected in the urine. We may remark that these results of Simanowsky and Schoumoff are in harmony with the known thermic effects of alcohol.

The Use of Plaster Filters for the Sterilization of Fermentible Liquids has been criticised by P. Cazeneuve. These filters were first employed by Pasteur for the separation of microscopic organisms from the liquids in which they may be suspended, and have been largely used for *cold sterilization.* They are made by simply allowing plaster mixed with water to harden in a funnel; after drying and subjecting to a proper degree of heat, the funnel is adapted to the cork of a bottle in which a vacuum can be made. Under the pressure of the atmosphere, the liquid is forced through the pores of the plaster, while the solid particles, no matter how small they may be, are retained. The plaster is usually mixed with asbestos, and the filters are prepared with great care. The small quantity of calcium sulphate dissolved out by the liquid has been found to exercise an antiseptic action, and, as Miquel has stated, porous porcelain filters are preferable for this reason.

Cazeneuve now shows that the plaster retains albuminoid matters: milk, blood, and bile, diluted with ten times the volume of water to render filtration more rapid, are completely deprived of albumen by passing through a plaster filter. If the filtration be continued for a sufficient time, however, the pores of the filter become saturated with the albumen and allow albuminoids to pass, but the filtration is slow and difficult. In the same manner an albuminous urine gave up all of its albumen to the filter. The plaster acts chemically, for it forms combinations with certain albuminoid substances. The action of plaster on legumine and on the albumen of barley is well known. At the same time, however, the plaster acts mechanically by its capillary structure, and removes from the liquids the colloids which they hold in solution.

The method of cold sterilization which is desired must leave the albuminoid matters in the liquid, for they are necessary to the development of certain microbes. In this respect plaster filters are faulty. They are open, moreover, to a more serious reproach: they retain the soluble ferments,—that is, the diastases. When it is necessary to decide whether a fermentative liquid owes its activity, perhaps its poisonous properties, to an organized being or to a chemical principle such as diastase, the separation of micro-organisms by plaster filters is essentially at fault. The diastase of sprouted barley, the myrosin of white mustard, the synaptase of bitter almonds, pepsin, and the diastase produced by the *torula urinæ* are all retained by plaster filters, as proved by numerous experiments.

The consequences of these results are important in the theory of fermentations

and of the virulence of fermenting liquids. The question whether a micro-organism acts by its own functions, ill defined as these may be, or, secondarily, by reason of a chemical compound secreted by it, in which case the action becomes chemical or physiological, cannot be decided by experiments in which plaster filters are employed. These criticisms apply to Pasteur's celebrated observation on the bacteria of *charbon*, for he employed plaster filters for the separation of the bacteria from the blood. The filtered liquid was no longer virulent, but whether the virulence is due to the bacteria or to a poison secreted by the bacteria is left in doubt, for both are retained by the plaster.

M. Cazeneuve states that porcelain filters are not open to this objection to those of plaster, and in this he is confirmed by M. Armand Gautier, who publishes the description of a new filter of unglazed porcelain, in which all of the joints are made with a fused boro-silicate of lead. With these filters M. Gautier claims to have obtained perfectly satisfactory results.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF WM. PEPPER, M.D., LL.D.,

Provost of and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

EPILEPSY.

GENTLEMEN,—This little girl has been before you on one or two occasions. Let me recall to your minds the more important features in her history. She is 10 years of age, born of healthy parents, with no inherited morbid tendency, and lives in a healthy neighborhood. Up to the age of five years she was apparently healthy, but at this time it was noticed that she was "nervous" when her attention was strongly fixed. There is no history of severe sickness or other cause to account for this. Shortly after this it was noticed that the child began to have falling-spells, and these would sometimes recur as often as two or three times a day, and at no time did she go a week without an attack. In these seizures she would fall to the floor if there was no one at hand to support her, and she evidently lost consciousness for the moment, for she would assert that some one had thrown her down. There was no general convulsion, but for a few minutes there would be trembling of the hands. She did not froth at the mouth or roll the eyes, but after the attack had passed she became very red in the face.

She was brought to the hospital four months ago. At that time she was having the spells very frequently, and the mother could not trust her out of her sight. Her memory was also much impaired.

The story of this case is one of apparently essential epilepsy. No peripheral cause can be found for these attacks. The child has no heart-disease; there is no history of an injury or of a sudden shock of any kind, but gradually, without apparent cause, she at the age of five years began to have these attacks, which continued to increase in frequency until four months ago.

At that time, learning that the girl had been under the care of the family physician for some time, I concluded that the bromides had been thoroughly tried. The child was exceedingly feeble; she would drop down on the slightest exertion, and many of the falls were undoubtedly the result of muscular prostration and debility. There was also to a remarkable extent a want of mental activity. The child was listless, and her memory was rapidly failing. Concluding then that the bromides had been used, I considered it useless to push them. I thought it better to direct attention to hygiene, diet, the administration of tonic remedies, and trust to the development of the system, rather than attempt by specific remedies to coerce the manifestations of the disease.

I ordered a properly-regulated diet and the use of a simple solution of the phosphates of soda, lime, and iron in an excess of dilute phosphoric acid. The child had no other treatment.

The mother reports that there has been decided improvement. The attacks do not recur so often, a week frequently intervening between the attacks. The disease is, however, far from being checked, but we are encouraged to persist in the plan of treatment adopted. In the mean time the child will be kept from school, the mother teaching her at home.

GASTRALGIA.

This man, a farmer, aged 39 years, has been sick for two years. His principal complaint is of pain in the left side. He has lived in a healthy locality, and has never had chills and fever. The pain begins in the left side and runs back to the left shoulder-blade. If he eats too much he suffers, but the kind of food taken does not appear to influence the pain. An ordinary meal does not make the pain worse, and eating sometimes takes away the bad feelings. Active exercise or riding over a rough road is apt to bring on the pain. The appetite is fair. The bowels are sometimes constipated, but as a rule he has diarrhœa about twice a week, there being two or three loose stools, but these contain no blood. He weighs one hundred and fifty pounds. His best weight was one hundred and sixty-two pounds, but during the summer he goes as low as one hundred and forty pounds.

Let me here refer to this matter of variation of weight. Many persons will be met with who have a wide range of what may be called normal weight. I never like to see this symptom, for it seems to me that those persons who lose flesh so rapidly cannot be made of very good stuff. A person whose flesh is solid and who is living a correct life should maintain pretty nearly the same weight summer and winter, varying perhaps from three to five pounds. Persons will, however, be found whose weight varies twelve or fifteen pounds at different periods of the year. With such persons I have observed that sickness goes hard; on the other hand, loss of weight in them is not to be regarded as of such serious moment as it would be in a person who was thoroughly in training and whose flesh was solid and well organized.

In reference to the pain complained of, when this pain is in the right side, we naturally suspect some trouble with the liver, —a gall-stone in one of the smaller ducts or in the gall-bladder; some congestion of the liver, causing dragging on the suspensory ligament, or irritation of the capsule of the organ. When the pain occurs on the left side, we think of the spleen, pleura, and heart, and when, as in this man, the pain associates with some shortness of breathing and overaction of the heart, we are apt to think more particularly of the heart. Examination of the heart shows it to be perfectly normal. There is no enlargement of the organ, no displacement of the apex-beat, and the valvular sounds are free from murmur. Neither is there any evidence of chronic pleurisy. There is good respiratory murmur and resonance over the left side. Examination of the spleen shows that the organ is not enlarged, and the man has not lived in a malarious district.

Before satisfying ourselves that this is merely a neuralgic trouble (possibly a form of gastralgia), some obscure conditions must be thought of. One of the most insidious of these, and one against which we should be continually on our guard, is caries of the spine. Caries of the anterior surface of the vertebræ constantly reveals itself by pain and distress in the neighborhood of the spinal column. Many cases of sciatica or intercostal neuralgia will be found to be due to caries of the anterior surface of the vertebræ, and the diagnosis should not be made until a sudden increase of the symptoms, with some numbness and failure of power in the lower extremities or the appearance of an angular projection, calls attention to the real cause of the trouble. You will do well to be on your guard against the occurrence of this obscure lesion. Aneurism of the descending aorta is another condition to be excluded.

There is no tenderness along the spine, neither is there any projection of the vertebræ, and jumping does not cause pain. No pulsation, thrill, or abnormal dulness can be detected. Caries of the spine and aneurism may therefore be excluded.

You observe that the pain is described as occurring in the right side and over the stomach; it is not markedly affected by eating, although radishes and some other articles make it worse, and it is worse when the stomach is empty than it is after an ordinary meal. It is associated with evidence of derangement of intestinal digestion, as shown by flatulence and irregular action of the bowels, sometimes constipation and sometimes transient attacks of diarrhœa. Having excluded the graver causes for this pain, we must conclude that it is neuralgic and occupies the stomach, and therefore a form of gastralgia.

As to the cause of this, the family history is good, and he has had good health until this affection developed. He does not use liquor or tobacco; he has not been

overworked, but has gotten into the habit of eating his meals hurriedly. The gastralgia has probably been brought on by this rapid eating.

In the treatment of gastralgia the regulation of the diet is the chief element. The stomach is rarely able to receive and handle enough food in three meals to support the system; consequently it is important that such patients should take more than three meals in the twenty-four hours.

Again, the stomach is so hyperæsthetic and the mucous membrane so irritable that unless some digestible substance is in the stomach the acid juices are apt to excite pain, and hence the pain is more marked when the stomach is empty, and the ingestion of food affords relief; so that for this purpose, also, it is desirable to give food oftener than three times a day. Meals of smaller amount, and of extremely simple character, and at shorter intervals, is the rule for the nourishment of gastralgic patients.

The character of the food requires very close attention. In general, it will be found that milk is one of the best ways in which to give nitrogenous and albuminoid food. The starchy foods are, as a rule, well borne, particularly because they do not require much gastric digestion, being digested, as you know, by the salivary, intestinal, and pancreatic fluids. At times, however, the starchy foods lead to the development of secondary acids in the stomach, in which case it becomes necessary to diminish the amount of starch allowed and increase the amount of skim-milk, the patient being practically placed on an exclusive milk diet for a certain length of time. Alkalies are often desirable, and lime-water mixed with the milk is a convenient way of administering these.

I shall recommend for this man the following dietary:

Breakfast. — Soft-boiled egg, oatmeal, bread and butter, and milk with lime-water. Between breakfast and dinner, a glass of milk and lime-water.

Dinner.—Potatoes, bread and butter, milk and lime-water, but no meat. Between dinner and supper, a glass of milk and lime-water.

Supper.—Mush and milk, with milk and lime-water to drink.

In selecting the remedies to be associated with this diet, you will be governed by your appreciation of the state of the mucous membrane more than by anything else. If there is no evidence of gastric catarrh, if there is simply the hyperæsthetic neuralgia and anæmic condition of the stomach, iron, arsenic, and belladonna may be given at once with confidence, the stomach being sheathed with bismuth taken at proper intervals after eating. Under such circumstances, a pill containing the following might be given:

℞ Quiniæ sulph., gr. j;
Acidi arseniosi, gr. $\frac{1}{50}$;
Pil. ferri carb., gr. j;
Ext. belladonnæ, gr. $\frac{1}{10}$.
M. et ft. pil. no. 1.
Sig.—To be taken after food, three times a day.

Any of the vegetable salts of iron may be substituted for the pill of the carbonate. In addition to this, ten grains of bismuth should be given two hours later, to protect the stomach when most empty.

If there be a catarrhal condition of the mucous membrane, as shown by a coated tongue, distress in the stomach, in addition to the paroxysmal pain and evidences of dyspeptic trouble, we are obliged to adapt our remedies to this condition, postponing the use of anti-neuralgic remedies until the inflammation of the mucous membrane is relieved. In such cases bismuth with pepsin, dilute mineral acids, carbolic acid, and salts of silver become exceedingly valuable for their antacid, sedative, and alterative properties.

For this patient, having directed a careful diet with an alkali, we shall order minute doses of nitrate of silver with belladonna.

Two weeks later, the patient reported much improved, and the pill of quinine, arsenious acid, and iron above given was substituted for the nitrate of silver, the same diet being continued.

Treatment of Intestinal Hemorrhage of Typhoid Fever.—At a recent clinical lecture, Professor Da Costa exhibited specimens from a case of typhoid fever in which death had occurred from peritonitis, with three recent perforations of the bowel. The patient four days before his death had had a profuse intestinal hemorrhage. The distinguished teacher took the opportunity of endorsing the ergot treatment of the hemorrhage, but insisted upon the importance of following it up with decided doses of opium in order to prevent perforation or to limit its effects.

TRANSLATIONS.

THE MEDICAL TREATMENT OF PULMONARY CAVITIES.—Professor M. Trastour, of Nantes, concludes an interesting clinical paper upon the medical treatment of vomicæ in the lungs with the following practical deductions. Given a case, tuberculous or not, which has had and still has pus in the lung, the pleura, or mediastinum, which pus is evacuated through a vomica, and sometimes through thoracic fistulæ,—a case in which there is no urgency, necessity, nor opportunity for thoracentesis, aspiration, or resection of the ribs,—what is the medical treatment to prescribe? This query he answers as follows: *First indication.* The suppuration can only cease if the walls of the pus-cavity retract sufficiently for cicatrization; for this it is required, on one hand, that the lung shall dilate, on the other, that the thoracic wall shall yield and become deformed. In some cases this deformity is very marked; and such depressions at one point or over one side of the chest are sometimes both striking and instructive, as noticed and figured by Laennec. The leaning to the affected side, the dropping of the shoulder, the diminution of the anterior and posterior muscular layers of the thorax in the young, a tendency to lateral deviation of the spine, and prominence of the scapulæ and sometimes the compensating fulness of the opposite side of the chest, were all noted by him also.

Chronic pleurisy, thoracic abscess, and tubercular cavities may all produce deformities of the chest in subjects that are still young. The chest, said Laennec, must retire to make up all of that which the enfeebled lung is unable to furnish by dilating. The first indication of medical treatment of vomicæ is, therefore, to favor the sinking of the chest-wall until cicatrization can occur, while diminishing as much as possible the inevitable deformity. To accomplish this what will be necessary?

First, empty carefully the cavity as completely and as frequently as possibly can be done. For this inversion has been practised with good results. Prescribe and obtain the frequent practising of deep inspirations, made methodically, in order that the lung may be made to expand.

Secondly, the disposition to the formation of pus must be combated; for which iodine preparations are recommended.

The third indication is to prevent emaciation by giving a liberal, easily-assimilated diet.

Fourthly, auto-infection must be guarded against by antiseptics and disinfectants. A glycerin spray, with or without carbolic acid, is very grateful to the patients.

Fifthly, revulsives are useful over the affected area of the lungs.

In the sixth place, and finally, he insists on the value of living in the country and of breathing pure air. He recommends to those suffering with empyæma that they should breathe the air of the fields, or even, as an experiment, to try that of the sea-shore when a favorable opportunity presents.—*Bull. Gén. de Thérapeutique.*

IODOFORM IN TUBERCULOUS ULCERATION OF THE LARYNX.—Drs. Kussner, of Halle, and Frankel, of Berlin (*Journal Méd.-Chirurg. de Buda-Pesth*), highly recommend the employment of iodoform in the laryngeal ulceration of phthisis. The former uses a ten-per-cent. solution in glycerin, applied by a small piece of cotton, and also an inhalation three or four times a day of the following:

℞ Iodoformi, one gramme;
Spts. vini, ten grammes;
Aquæ, fifty grammes. M.

This can also be used in the atomizer. It is claimed that under this treatment the ulcers clean off and proceed to repair, but the general condition is also much improved: (1) the cough is reduced and expectoration diminished; (2) the hectic fever is reduced.

Dr. Kussner, on the contrary, has not found that the physical signs of phthisis are modified, but, although iodoform cannot be regarded as a specific, some cases are much benefited, because it retards the evolution of the disease and causes the disappearance temporarily of some of the symptoms.—*Bull. Gén. de Thérapeutique*, October 15.

THE USE OF ANTIPYRINE HYPODERMICALLY, it is claimed, causes neither general nor local inconvenience (*Centralblatt für der Gesammt. Therapie*). The best solution for this method of administration is said to be one gramme of antipyrine in fifty centigrammes of water, dissolved with the aid of heat.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 15, 1884.

EDITORIAL.

EXPERT MEDICAL WITNESSES.

OF medical experts upon the witness-stand it might almost be said, repeating Whately's criticism of Whewell, that "Science is their forte, omniscience their foible," for your medical witness usually expresses his opinions with as much assurance upon purely legal questions as he does upon medical matters, assuming at once the functions of counsel, judge, and jury. This unfortunate propensity is often utilized by counsel in order to discredit the testimony of the witness upon other and purely scientific questions. We were pleased, however, to notice, during a recent criminal trial in this city, that Prof. Wood, when upon the witness-stand, recognized this distinction; and when asked "If he thought the prisoner responsible for the deed?" he at once referred the question of technical responsibility to the court itself, where it really belonged.

To show the status of the expert witness, we may also note that during the same trial an officer of the prison, not a medical man, was put upon the stand to testify concerning the mental state of the prisoner at the time of committing the murder, and his years of experience with criminals were ingeniously paraded by counsel, obviously, in order to put him before the jury in the same light as the medical witnesses whose testimony he was brought forward to oppose. Apparently the non-medical testimony was sufficient to outweigh that offered by the medical experts, because the jury brought in a verdict of guilty of murder against the poor criminal, although he was believed to be insane by competent medical witnesses, and had been so pronounced after more than one careful examination.

It is quite time that some change had been made in our prevailing methods of taking medical testimony. The facility with which many physicians can be induced to go upon the stand in order to directly oppose the testimony of their brother-physicians brings discredit upon medical science and disgrace upon the profession. It is this practice which has led a judge to declare slightingly that "doctors could be obtained to swear to anything," and which has especially confused the public mind upon great medico-legal questions, such as how far legal responsibility may be affected by different degrees of mental unsoundness. Since medical questions must occur, and since they can only be answered by physicians, it will continue to be necessary to have medical experts to instruct the court. We are entirely opposed, however, to the present loose method of selecting them, and particularly to their being pitted against each other by opposing counsel, to the great scandal of the profession. A change in the practice might be made which would be more in keeping with the dignity of the profession, and would aid, or certainly not retard, the course of justice. Instead of wrangling openly in court, let the experts selected by the counsel upon both sides, perhaps with the addition of one appointed by the judge, form a medical commission, to whom purely medical questions shall be referred for consideration and decision in private session, the responsibility of acting upon their conclusions being left to the court. If, for instance, it be in a case of supposed insanity, the commission would communicate simply the result of the medical examination to the court, leaving the degree of responsibility and the question of punishment where it belongs.

The appointment of medical examiners, in place of that obsolete functionary

known as the coroner, would greatly facilitate the solution of such questions, to the great satisfaction both of the profession and the public. We commend this question to the medical societies for agitation.

GLOSSO-LABIAL PARALYSIS.

MODERN thought and research drift more and more to the position that the affection described by Duchenne as glosso-labial paralysis, and long supposed to be distinct, ought to be stricken from the list of diseases. In its typical form it is certainly only a localized chronic poliomyelitis, a mere variety of chronic muscular atrophy, in which the gray portion of the upper segment of the spinal cord—*i.e.*, the medulla oblongata—is especially attacked. It may exist by itself, or it may be associated with symptoms of palsy, due to poliomyelitis, in other parts of the body. In the latter case the medulla may be the first part of the cord invaded, the disease extending downwards, or the lesion may progress upwards and the medulla show the latest change. In a very interesting case recently shown at the clinic of Prof. H. C. Wood, the first symptoms were perceived by the patient in the mouth region, and subsequently the cervical cord became profoundly affected.

To grant these labio-glossal paralyses a separate state in our classification of disease would logically require similar treatment for cases of progressive muscular atrophy in each part of the body, since any spinal region may be attacked alone or separately.

The absurdity of the present separation of glosso-labial palsy is further shown by the circumstance that we may have such paralysis due to various apoplexies, brain-tumors, and other coarse cerebral lesions, and, to be logical, we should also isolate as a distinct disease cerebral glosso-labial paralysis.

In No. 20, *Archives de Neurologie*, is an important paper upon such an affection, by Dr. F. Raymond, in which illustrative cases are cited. The symptoms may, in case the lesion is a tumor, or other progressive alteration of brain-tissue, develop slowly, but they usually come on suddenly, because they are usually the result of clot or other apoplectic lesion, and, while they may develop alone, they are usually associated with other consentaneous palsies. Whether the manifestations come on slowly or rapidly, the cases are to be distinguished from those of medulla-disease by the absence of atrophic changes in the muscles affected, and by the preservation of the normal electrical reactions. The symptoms are stationary or progressive, as the case may be, *pari passu* with the cerebral lesion. The latter is either cortical or in the white matter. The general localization of the lesion of the white matter is in the lenticular nucleus or the external capsule, or sometimes in the internal capsule or peduncle. The foot of the ascending frontal convolution is stated to be the position in which cortical lesions cause the glosso-labial palsies.

SALT *vs.* SNOW IN THE STREETS.

THE City Councils, having solicited medical opinion as to the influence upon the public health of salt when used to melt the snow between the street-car tracks, have been supplied with opinions of decidedly diverse character.

As regards the question as to its causing zymotic diseases like diphtheria, we think that it will be generally admitted that chloride of sodium is more likely to prevent such disease than to propagate it. Indeed, any malign influence that it is capable of exerting must be exceedingly small, since the few steps that could possibly be taken by the pedestrians at the street-corners when crossing the tracks could scarcely affect the temperature of

the feet. If the inlets are kept open, so that the slush is rapidly carried away, we think that salting the track would be an advantage to the public health by aiding in keeping the streets comparatively free from snow and ice.

NOTES FROM SPECIAL CORRESPONDENTS.

NEW YORK.

THE medical colleges of this city have begun the regular course with about the same number of students and under about the same circumstances as last year. To this general statement we might add a modifying one as regards the Polyclinic and the Post-Graduate School, both of which have improved buildings and facilities for instruction over those which they possessed at the commencement of the term last fall. The Post-Graduate faculty bought and refitted a building at 226 East 20th Street, which, it is understood, is used as a college and hospital combined. The building contains a large number of compartments, so that each professor can have a room for himself in which to give instruction without the disturbances which are always likely to occur in a general lecture-hall. Dr. E. Kershner has been appointed Professor of Naval, Military, and State Hygiene.

Dr. Thomas A. McBride now shares the chair of Diseases of the Mind and Nervous System with Dr. Gray at the Polyclinic. Dr. McBride is known as a conscientious and hard worker: he will add strength to the college. The building formerly occupied by the faculty has been purchased and refitted, and now possesses nearly all the advantages which could be desired for giving post-graduate instruction. We might mention, for example, a large room with accommodations for more than thirty students to study diseases of the eye, throat, and nose, and of the ear, all the necessary apparatus being at hand. The school has a third more students than at any previous term, including professors of colleges,—among others, one from Mexico is seen, accompanied by his interpreter.

The College of Physicians and Surgeons is the recipient of the magnificent donation of five hundred thousand dollars from the hand of Mr. William H. Vanderbilt. A new building, about two hundred by three hundred feet, will be put up opposite Roosevelt Hospital. The college has an excellent faculty, and, with its new facilities, will doubtless do even more than it has been doing towards the elevation of medical education, and, indirectly, towards diminishing the sufferings of humanity.

At the last meeting of the New York County Medical Association Prof. Austin Flint read a paper on "The Parasitic Theory of Epidemic Cholera," in which he gave an excellent *résumé* of the facts and arguments for and against Koch's doctrine. Dr. Flint pleaded for a greater amount of original work in the study of the parasitic origin of diseases by American physicians, suggesting, if not prophesying, that in this field the honor of making permanent and important discoveries was to be obtained.

The health of New York at present can well be said to be good, and yet the Sanitary Bureau reports forty-two cases of typhoid fever for the week ending October 14, and fifty for that ending October 21, and of diphtheria there have been, for the same weeks, forty-five and forty-three cases respectively. The death-rate from diphtheria is pretty large, being, for the first week mentioned, twenty-nine, and for the second thirty.

The New York Obstetrical Society has re-elected Dr. William M. Polk President for another year.

The new local anæsthetic, hydrochlorate of cocaine, is being extensively tested in this city, particularly by the eye-specialists. They report favorably upon its action. Country physicians will do well, for the present at least, not to order it in pound quantities, unless they do business on the credit system.

R. C. S.

PROCEEDINGS OF SOCIETIES.

AMERICAN ACADEMY OF MEDICINE.

THE Ninth Annual Session was held at Hopkins Hall, Baltimore, October 28 and 29, 1884.

The Academy was called to order at three o'clock by the President, Dr. Benjamin Lee, of Philadelphia, who invited the Rev. J. E. Grammar, D.D., to open the session with prayer. The minutes of the last session, and the report of Council showing their action since the last meeting, were read and approved.

The following gentlemen, applicants for fellowship, having been approved by Council, were balloted for and elected: Drs. I. H. Baxter, Washington, District of Columbia; G. W. Miles, Perryville, New York; A. B. Tadlock, Knoxville, Tennessee; E. E. Barnum, Waterport, New York; C. W. Stevens, Boston; John A. Robinson, Chicago; L. L. Miner, Wilkesbarre, Pa.; H. A. Johnson, Chicago; F. S. Johnson, Chicago; J. W. Holland, Louisville; H. P. C. Wilson, Baltimore; W. W. Jaggard, Chicago; Charles Warren, Washington; J. N. Hyde, Chicago; Ira B. Reade, New York; L. S. McMurtry, Danville, Kentucky; E. O. Shakespeare, Phil-

adelphia; Douglas Morton, Louisville; M. P. Hatfield, Chicago; T. E. McArdle, Washington; S. M. Free, Dagus Mines, Pennsylvania; F. R. Graham, Chester, Pennsylvania; W. P. Watson, Jersey City, New Jersey; J. G. Young, Philadelphia; Joseph Coblenz, Baltimore; J. S. Green, Elizabeth, New Jersey; J. M. Stevenson, Pittsburg, Pa.; David Brekes, New York; E. L. Keyes, New York; E. Andrews, Chicago; E. A. Andrews, Chicago; C. Kollock, Cheraw, South Carolina; W. Murray Weidman, Reading, Pennsylvania; T. C. Stellwagen, Philadelphia; M. E. Wordin, Bridgeport, Connecticut; G. R. Morehouse, Philadelphia; E. Cowles, Somerville, Massachusetts; F. H. Davenport, Boston; E. O. Otis, Boston; T. J. Turner, Washington; T. B. Brune, Baltimore.

Drs. Bulkley, Steiner, and Bombaugh were appointed a Committee on Nomination.

The first paper of the afternoon was by Peter B. Keyser, M.D., of Philadelphia, entitled "The Relation of the Medical Colleges to Preliminary Education." This relationship was deduced from the statements made by the various colleges in their announcements, and examining those statements and the method of their execution. It appeared that but comparatively few of the ninety-one medical colleges in our country made pretence to preliminary education of any value whatever, and even among the few but a small proportion rigidly enforce their own requirements.

"The Examination of Applicants for License to Practise: A Means of Raising the Standard of Medical Education" was the title of the next paper, presented by Edward Jackson, M.D., of Philadelphia. (See page 85.)

Henry O. Marcy, M.D., of Boston, was the author of the third paper of the afternoon, having for its title "The Rôle of Bacteria in Infectious Disease." There is no subject in medicine, either in relation to its theory or practice, of greater interest, and much has been written about it,—so much, indeed, that this paper would not have been written had it not been for the assertion of "not proven" in one of a series of semi-popular lectures delivered in Boston, where the assertion was made that even in fermentation it could not be asserted to be caused by the development of a low order of vegetable organisms. This verdict was based upon the assumption that the micro-organism in any series of experiments had never been separated from the ambient organic living matter, which must be considered to have a low degree of inherent vitality, and that not until a well-washed micrococcus or bacillus had been isolated upon the point of a needle and then introduced into a sterilized nutrient solution would the real condition of the problem be fulfilled.

Since anything may be doubted, it is often well to re-examine the foundations, for science is only pure and simple truth, and never suffers by testing. The author determined to make a few experiments in the direction of the objection; for while negative truth may be as valuable as positive demonstration, the latter should not be neglected. Recognizing in the term "ambient living matter" the bioplasm of Beale, a set of experiments were conducted to determine the bioplastic power of protoplasmic matter. The blood of healthy oxen and sheep was selected, and collected under proper precautions as soon as the clot had separated; sterilized glass bulbs were filled and sealed with the flame, and others charged with sterilized culture-fluids were inoculated in varying proportions. These were kept for differing periods of time, subject to the same conditions as for the growth and testing of various bacterial organizations, and careful examination made at different dates by means of a Zeiss one-fourteenth objective giving an amplification of about one thousand diameters. In twenty bulbs change took place only in one, and in this one, upon its first opening, on the third day, there was no change.

Still further experiments were made with albumen from an egg still warm from the nest, milk aseptically milked and put up at once, and the aqueous humor from the eye. In a series of forty-one bulbs only two contained bacteria or micrococci, which were evidently accidentally introduced. It seems fair to deduce that this ambient living matter possesses no power of reproduction, which has been usually accepted, in fact.

At present no one denies that the micro-organisms exist: whether they are or are not the cause of disease is a question of importance. If the relationship of cause and effect can be demonstrated in the class of zymotic diseases, medicine will at last have a scientific foundation. Although science is pure and simple truth, we have here a very difficult problem, where probably at present generalizations are premature, but from the accumulated facts of many independent investigators he believed that such demonstration is in the near future.

To establish the action of micro-organisms they must be separated from everything else, whether living ambient matter or a chemical poison having relation to disease. This organism thus separated must, upon inoculation in the tissues of a healthy living animal of the same species, cause a reproduction of the disease.

To separate the micro-organism fully, the process of pure culture has been devised, so that in some of Dr. Sternberg's experiments less than one-quadrillionth of the original septic material remains in the eighth culture; yet a few minims of this possess all the virulence of the first, and the action is entirely different from that of a chemical poison.

With this demonstration the author passed in review the various diseases which are

proven, to a greater or less degree, to be dependent upon septic action. It may be concluded from this review that the time has passed when the critic of the germ theory of disease can content himself by captious remarks.

"The Trade-Aspect of Medicine," by Albert L. Gihon, M.D., was the next paper. (See page 116.) The object of the paper was to show the great tendency of the times to belittle the profession of medicine to a trade in medicine, to show the meanness of so doing, and to suggest a better way.

This was the last paper for the afternoon, the Academy going into executive session, when a resolution was adopted that a committee of two be appointed in each State where the Academy has Fellows, for the purpose of suggesting and furthering the appointment of independent examining boards.

THE PRESIDENT'S ADDRESS.

The evening session was given up to the President's annual address. Vice-President Gihon presided. The subject of Dr. Lee's address was, "Differentiation the Test of Civilization: The Specialist and his Education."

In selecting a topic for the annual address the President cannot go far astray if he selects some topic of an educational character, since the Academy should keep on striving until every practitioner is as well a gentleman and a scholar. He had selected the Education of the Specialist as a topic fitting the occasion and the place, since in Baltimore special practice was first recognized. In Baltimore was the first school of dentistry in which this specialty was treated as really a branch of the medical profession. In the development of any nation from barbarism towards civilization a division of labor keeps equal step with the advance, and thus increases the skill in all trades, manufactures, and business. In the learned profession the same principles have been at work, but the process has received more or less opposition,—more in this country than abroad. Thus, in England there are several recognized classes of lawyers, each with special qualifications. The same is true here, but they have all the same title.

The science of medicine is expansive, while law and theology are fixed, and yet the opposition has been stronger to separation in medicine than in the other professions. The arguments against the practice of specialties may be classed under three heads: 1st. The multiplication of specialties has a narrowing effect upon the doctor practising the specialty. 2d. It degrades the profession. 3d. It is not best for the patient.

On the other side it is claimed that specialism is nothing new, strange, or foreign. Medicine itself is a differentiation, for in times past the priest and physician were one. Then there are surgeons, physicians, obstetricians, and alienists. Why not carry the division further? The day of the cyclopædist is over, and men are not able to be proficient in the whole circle of medical science. Why should they not concentrate upon a portion? The more specialized the animal, the more important it is; so in social life, the more complex it becomes, there is the greater need for specialists. Here, as elsewhere, differentiation is a test of civilization. The defence calls witnesses and asks if there have not been important contributions to medical knowledge from the studies of specialists. So are the arguments, and in whatever way we may look at it two facts seem patent,—the specialist has come, and he has come to stay. And whether we think of him as the product of a degenerated race or the flower of the profession, we ought to make the best of him. What shall he be, a physician and something more, or something less than a physician? He should have, if possible, even a better preliminary training than the general practitioner; the self-consciousness of a dwarfing due to the special line of study is belittling, and his preliminary education should be broad. As to his medical education, he has use for all of the old seven sets of subjects, except, perhaps, obstetrics, for this is a special study; and, as he is apt to see disease in its more chronic form, the residency in a general hospital where acute forms of disease can be seen would be of use. Then comes the special training, whether at Alma Mater or in a polyclinic. With such a training a specialist will not threaten the profession.

At the conclusion of Dr. Lee's address the Fellows adjourned to the Athenæum Club, where they had their annual collation, having a most enjoyable time.

SECOND DAY'S SESSION.

The Council recommended the election of Drs. George M. Sternberg, U.S.A., and Oliver Wendell Holmes, of Boston, as honorary members, and the following gentlemen for fellowship: Drs. R. J. Levis, of Philadelphia; J. W. Kerr, of York, Pennsylvania; Alexander Hadden, of New York; and J. D. Kelley, of Utica, New York; making forty-five in all.

They also presented a series of amendments to the constitution and by-laws for the purpose of making another class of members,—Associates, who shall consist of those who have attained distinction in medicine and the collateral sciences and do not possess the degree in arts, the qualification of a Fellow. These lie over under the rules until the next session. The following resolution was adopted:

"*Resolved*, That the American Academy of Medicine recognizes in the recent munificent gift of Mr. W. H. Vanderbilt to the College of Physicians and Surgeons of New York a most important and valuable service to the science of medicine in America.

"That in this spirit the Academy tenders to Mr. Vanderbilt its obligations, with the assurance that in no better way could the higher education of our profession and the benefit of humanity be promoted."

The nominating committee presented the following report, which was accepted and the gentlemen elected:

President.—Albert L. Gihon, M.D., U. S. Navy.

Vice-Presidents.—R. Stansbury Sutton, M.D., Pittsburg; James A. Stewart, M.D., Baltimore; William Elmer, M.D., Bridgeton, New Jersey; J. Cheston Morris, M.D., Philadelphia.

Secretary and Treasurer.—R. J. Dunglison, M.D., Philadelphia.

Assistant Secretary.—Charles McIntire, Jr., M.D., Easton, Pennsylvania.

The first paper of the morning was by A. D. Rockwell, M.D., of New York, on "The Induction Coil: its Varieties, and the Differential Indications for their Use."

By means of diagrams the two kinds of induction coil, the separate and continuous coils, were explained, and a preference was expressed for the latter form, from the ten currents, of which the author had separated three capable of performing the work of the whole ten.

First.—The current obtained from the primary coil of large quantity and small tension, having little contractile power upon muscles in health; useful in head-neuralgia and asthenopia.

Second.—The combination of the primary coil with the first and second induction coil, giving a current which has the maximum power to contract muscles, each additional coil weakening it in this direction. It is harsh and unpleasant, and of use when a profound impression is desired.

Third.—A combination of the primary in connection with all three induction coils. Very important tonic and sedative in character; to be used in general faradization.

"Some Comparative Results of Treatment of Chronic Articular Osteitis of the Hips," by V. P. Gibney, M.D., of New York, was read by title and referred to Council.

C. C. Bombaugh, M.D., of Baltimore, read the next paper, entitled "The Place of the Physician in Literature." This paper, by careful quotations concerning doctors from the writings of all time, was a means of "seeing oursels as ithers see us," and, by analyzing the criticism and satire, showed clearly that there was much foundation for the sport made of the profession, while, unfortunately, the profession were not always willing to profit by the portrait. Looking about us, there seems to be ample opportunity for other Molières, unless the profession improve and are wise to learn.

"Observations in One Hundred and Thirty-seven Abdominal Sections" was the title of a paper by R. Stansbury Sutton, M.D., of Pittsburg.

The cases upon which these observations were founded were operated on by various operators in America and Europe, and comprised the various forms of abdominal section.

McDowell's operation, as a rule, is performed upon patients of the poorer class, in this country, not until late, when the health is broken down; in Scotland, England, and Germany earlier, and in a special hospital; in Austria not so early, and in the general hospital, where the successes are not so great. The author favors the English plan. An ovariotomy done early may be considered one of the easiest of surgical operations; but a neglected case is a very different affair. After the completion of the operation it is most important to leave the peritoneal cavity perfectly dry. As a rule, the younger subjects do best, but older people bear the operation well. Climatic influences seem to have but little effect upon the success of the operation. Cleanliness to the last detail must be insisted upon. The prevention of the loss of blood is of the greatest importance. Drainage in intra-abdominal operations should only be resorted to when from any cause fluid might be poured into the cavity. Abdominal operations are growing in frequency every year, and after excluding pregnancy, renal and heart disease, there is a tendency not to attempt a diagnosis of the character of the tumor until after section.

The author strongly recommends the selection of cases for operating, refusing those who have been tapped so often that success is almost impossible, for the purpose of putting a stop to the operation of tapping by the family practitioner, and because a fatal operation is apt to deter others who would probably have a favorable result.

At the conclusion of Dr. Sutton's paper the Academy took a recess to visit the laboratories of Johns Hopkins University.

Upon reconvening, after a discussion upon Dr. Sutton's paper, L. Duncan Bulkley, M.D., of New York, read a paper on "Specialties and their Relation to the Medical Profession," in which the author concluded that the science and art of medicine was too vast for one mind; so there must be divisions of study. But the foundation should be one. A man should rather grow into special practice than be pruned into shape for it.

"Physiology in its More Public Relations," by Nathan Allan, M.D., of Lowell, Massachusetts, was read by title, and referred to Council. Telegrams were received from Drs. Knapp and Chrystie, of New York, expressing their regret at their inability to be present with their papers.

The report of the Committee on Laws regulating the Practice of Medicine was read in part.

Dr. Lee introduced the President-elect, Dr. Gihon, who appointed Drs. L. Duncan Bulkley and E. H. M. Sell, of New York, as additional members of Council.

Votes of thanks were given to the retiring President, Dr. Lee, and the authorities of Johns Hopkins University, and the Academy adjourned.

After adjournment the Fellows visited the Johns Hopkins Hospital, under the guidance of Dr. J. S. Billings.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held October 16, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

The President invited Dr. JOHN SCOTT, of San Francisco, to take a seat on the platform.

Dr. H. MARION SIMS presented to the Academy a BRONZE BUST OF DR. J. MARION SIMS, it being a copy of a marble bust by the eminent Parisian sculptor, Du Bois.

Dr. WILLIAM H. DRAPER then read

A MEMOIR OF THE LATE WILLARD PARKER, M.D., LL.D.

The scientific paper of the evening was read by AMBROSE L. RANNEY, M.D., and was entitled

THE THERAPEUTICAL EFFECTS OF THE INTERNAL ADMINISTRATION OF HOT WATER IN THE TREATMENT OF NERVOUS DISEASES.

The author spoke of a mutual dependence existing between disorders of the thoracic, abdominal, and pelvic viscera and some forms of functional disturbance of the nervous system. This remark was prefatory of what should follow.

Hot water is largely used among the laity at the present time as a medicinal agent, and this use had been suggested principally by word of mouth, and not by published matter. The treatment seems first to have been employed by Dr. Salisbury in 1858.

After directing attention to the modes of action of heat, Dr. Ranney said the benefits which resulted from the internal use of hot water must be due, in part at least, to heat. Some of its effects were manifested almost immediately in organs not connected with the digestive apparatus.

The following rules were laid down for the administration of hot water. 1. It should be taken in doses of from one goblet to one and a half. 2. It must be drunk hot, from 110° to 150° Fahr. If necessary, fifteen minutes or more might be consumed in sipping it. 3. It should be taken an hour and a half before each meal, and also at bedtime. The quantity taken daily should be modified according to the effects produced. 4. The temperature of the water should be increased as fast as the patient could bear it. Below 110° it acted as an emetic. 5. The administration should be continued for at least six months to get the full effects. It would be some weeks, as a rule, before any beneficial effects became markedly apparent. 6. The dose should be determined largely by the specific gravity and general character of the urine. If it fell as low as 1.010 the dose should be reduced to one-half a pint; if it reached 1.030 it should be gradually increased to a pint, provided there was not profuse sweating, with diminished quantity of urine. 7. The use of cold fluids should be absolutely prohibited. 8. A restricted diet was often necessary to the full effects of the treatment in some forms of nervous derangements. With some patients he forbade sweets, fats, and pastry; in others he allowed only a lean-meat diet.

The effects of this treatment were manifest in increased activity of the skin, warmth of the extremities, the circulation became more uniform, and it was believed that the viscera became disengorged; the quantity of the urine was increased; the accessory organs of digestion, the liver and pancreas, were stimulated; the fæces, which at first were dark, became soft and yellow, taking on more the appearance of the fæces of the infant. He had known the treatment to check hæmorrhoidal bleeding and chronic diarrhœa. He believed certain cases of locomotor ataxia had been benefited, but other forms of treatment were continued at the same time. Some cases of diabetes had rebelled against every other form of treatment, including that of diet, but when hot water was added the patients began almost immediately to improve, and in a short time were apparently cured. It had cured three cases of gastralgia with extreme paroxysms. Neurasthenic patients were almost invariably benefited,—those presenting symptoms of cerebral hyperæmia and anæmia, etc.

Dr. Ranney thought the neurotic theory of the action of the hot water the most plausible, and then spoke of the intimate relationship between the several centres of the vaso-motor nerves to one another and to the cerebro-spinal system, both as to connection and reaction upon one another. Did not the hot water produce a direct effect upon the solar plexus, which lay just behind the stomach, and by reflex action upon the other system of nerves?

Dr. Ranney believed the chief benefit derived from a visit to the hot-water springs was due to the agency of heat, to a restricted diet, and to enforced physical and mental rest.

DISCUSSION.

Dr. E. C. SEGUIN had not had much experience in the use of hot water, and had never employed it in purely organic affections of the nervous system. He thought there were

several points in the paper which were open to some question. He thought, for instance, that the water did not reach the stomach in a sufficiently hot state to act in the manner suggested by the author. While passing to the stomach it lost some of its heat, just as ice-water imparted some of its cold: there was a tendency to equalization of the temperature of the fluid and the food-passages. Again, many of the disorders spoken of as affections of the nervous system were due to, or at least associated with, disorders of the digestive system, with mal-assimilation, and in these cases the restricted diet of itself would often prove very beneficial. He asked the question if it was not possible that the benefit was due to the water as a fluid, and not to its heat-properties. Many patients had a lack of desire for water, and it had been found that if they could be induced to take more than what their appetites called for they would receive benefit. The theory advanced regarding the action of the agent might have some foundation, but he thought a good share of the benefit produced was to be attributed to the water itself, and but little would be left to attribute to the action of heat. Dr. Seguin then spoke a word in favor of cold water, ice-cream, etc. They did not reach the stomach ice-cold.

Dr. R. W. AMIDON had for some time used hot water in the treatment of nervous phenomena connected with dyspepsia or the gouty and rheumatic diatheses. He agreed with the last speaker, that the action of the hot water as a derivative or counter-irritant was extremely doubtful. He did not believe that when it reached the stomach it was sufficiently hot to produce a counter-irritant effect. He understood the author to say that the beneficial effects of the hot water were obtained only after six months, but Dr. Amidon's experience taught him that counter-irritants acted much sooner than that. He believed the hot water acted more as a diluent; that it increased destructive metamorphosis and the powers of assimilation.

Dr. L. PUTZEL thought the theory concerning the action of hot water taken into the stomach, as advanced by the author of the paper, proved too much, for he had said that the agent had proved of benefit both in cases of cerebral hyperæmia and cerebral anæmia, and Dr. Putzel did not think it could act beneficially in opposite conditions. He would lay some stress upon the point made by Dr. Amidon, that an agent which acts by its irritant effects should produce its results quickly. He should suppose that the best results from the use of hot water would be obtained in the commencement of the treatment, as afterwards the stomach would become habituated to the irritation.

Dr. W. B. BIRDSALL believed that there was a good deal of efficacy in hot water, as well also in cold water, when used as therapeutical agents. He was not prepared to deny the influence which it had been stated heat played in this mode of treatment. But what he had been most anxious to hear was statistics of a clear character which would enable us to judge of the effects of hot water, particularly in the class of cases which were strictly disorders of the nervous system, as locomotor ataxia. But, unfortunately, the cases related had been submitted to a combination of treatment, and not to that by hot water alone, and we were therefore unable to tell what part had been played by this agent in the production of beneficial results. In the cases of functional disturbance of the nervous system it would be difficult to say how much of the good result was to be attributed to the element of heat and how much to the diluent properties of the agent. He thought the hot water might begin to produce its effects as an agent of heat the moment it came in contact with the mucous membrane in its passage down to the stomach. His impression was that it was not the influence of the heat upon the vaso-motor system alone which caused the results. It might also have produced some influence upon the other system of nerves.

Dr. C. L. DANA had used hot water in cases of nervous disorder associated with gastric disturbances, particularly in hysterical women, but he had not been favorably impressed with its efficacy. The want of favorable results, however, might possibly have been due to lack of carrying out the treatment so persistently as the author recommended. He believed that the paper would result in benefit in suggesting a mode of treatment for a class which usually resisted almost all kinds of treatment, and, as Dr. Wilks had years ago pointed out, those agents which were not directed immediately to the nervous system were more likely to prove efficacious in the treatment of this class of disorders.

Dr. J. L. CORNING had obtained good results from the use of hot water in cases of so-called neurasthenia with concomitant gastric disorders. He had attributed the good effect to the influence produced upon the mucous membrane of the stomach by the hot water. He had obtained good results in from six weeks to two months.

Dr. JOHN SCOTT, of San Francisco, had employed hot water in checking emesis, especially after the administration of ether. He had also given water in the form of a milk diet with great benefit.

Dr. RANNEY, in closing the discussion, said that any one who would take hot water as he had recommended would be convinced after drinking it that it reached the stomach in more than a warm state. Hot water could not lose much of its heat before it reached the stomach. It had been suggested by some of the speakers that the beneficial effects produced by the hot water were due to its diluent qualities, but he had obtained results with

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four goblets of hot water a day which could not have been obtained by as many gallons of water in its ordinary state. He had been misunderstood to say that the effects were produced only after the lapse of six months. What he did say was that in some cases it took from five to six weeks to get marked effects, and in some six months to produce the full effects. The theory which he had suggested concerning the action of the agent seemed to have been the chief basis of the discussion and adverse criticism. He had advanced the theory simply as being to him the most plausible, but it might be entirely incorrect, yet the facts as to the result of treatment by the swallowing of hot water existed. As to Dr. Putzel's criticism, that benefit could not be produced in opposite conditions in both cerebral hyperæmia and cerebral anæmia, he would say the agent had a tendency to restore the parts to their normal condition, and in so doing would tend to relieve any abnormal condition which might exist in the brain. One man who drank whiskey would become bloated and fat, while another, taking the same agent, would lose flesh and become thin. It had been doubted whether his cases proved anything, as different agents were employed in the treatment at the same time. But the other measures had failed to produce any benefit until combined with the use of hot water. It followed, therefore, either that the hot water alone had produced beneficial result, or that hot water combined with other remedies had done so.

Dr. T. H. BURCHARD asked Dr. Ranney whether he had observed any permanent disturbance of the digestive system produced by the hot water when used for some time, and also whether he had observed that it caused a tendency to internal hemorrhages. He had seen many patients at Saratoga Springs, who had been treated by this method, and, after five or six months, had experienced disturbance of digestion, had lost flesh, and become greatly reduced in health; and others had shown a tendency to gastric and intestinal hemorrhage.

Dr. RANNEY replied that he had never known intestinal hemorrhage to occur in a patient to whom he had administered hot water, and he had treated a great many patients in this manner. Nor had he known it to produce permanent disorder of the digestive powers. He had known patients to rapidly lose weight, but it was due to the restricted diet which had been purposely recommended, and they would quickly regain their weight on returning to a general diet.

A NEW ANÆSTHETIC.

Dr. C. R. AGNEW made some remarks upon hydrochlorate of cocaine as an anæsthetic when applied to the conjunctiva. Since attention had been called to the subject by a letter published in the *New York Medical Record*, October 11, he had employed the agent in a number of cases in which he had performed operations upon the eye, and both he and the observers had been greatly satisfied and astonished with the beauty of its action. He felt that nothing of greater value had been given to surgery since the discovery of ether and chloroform. He distinctly disclaimed any priority in its use in this city. The action of the agent was demonstrated upon two gentlemen present at the meeting. It had not been positively determined whether the agent was capable of producing local anæsthesia in wounds of the skin.

Dr. BURCHARD said it had produced anæsthesia in the finger, the seat of a felon, so that he had been enabled to open the felon without pain to the patient.

Dr. BIRDSALL had been in the habit, the past two years, of employing erythroxylon coca to produce a benumbing effect upon the mucous membrane of the air-passages.

The PRESIDENT referred to the effects of the fluid extract in clearing the voice.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held October 22, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

GENERAL CARCINOMA.

Dr. JOHN A. WYETH presented a specimen with the following history. A German, 38 years of age, was admitted to the Mount Sinai Hospital, September 10. In May last he noticed a tumor to the left of the umbilicus, which grew until, by its size and position, it gave him much inconvenience. On admission, the tumor involved the umbilical, left inguinal, and lumbar regions, extending downward to the symphysis pubis. The patient had lost eighty pounds in weight during the last four months. Pressure over the tumor, under the liver, over the left kidney, and also over the thorax on the left side, gave rise to pain. There was some bulging at the upper part of the left side of the chest, the outline of the clavicle being entirely obliterated. The left axillary and supra-clavicular glands were enlarged. There was marked dulness, diminished voice and breathing; crepitant, subcrepitant, and sonorous râles at the left apex anteriorly; also marked laryngitis, loss of voice, and spasmodic cough. The patient suffered constantly from pain. On the 16th of September the patient felt great pain in the left leg and thigh, the limb became cold and mottled in color, the foot anæsthetic; there was no pulsation in the femoral artery. Swelling of the limb increased, accompanied with pain in the course of the femoral artery, and several blebs developed near the ankle. The patient died on the 15th of October, of signs of pulmonary œdema. At the autopsy a large carcinoma was

found occupying the left inguinal and lumbar regions, covered by the mesentery and attached to the vertebral column, also to the descending colon and left kidney. Hydronephrosis had resulted from compression of the ureter. The tumor seemed to arise from the lower dorsal and lumbar glands, and surrounded the aorta and vena cava. The left external iliac artery was flattened, and there was thrombosis of the vein extending down into the femoral. The anterior mediastinum was occupied by a new growth attached to the sternum, extending backward, surrounding the trachea and great vessels of the neck. The apex of the left lung was pushed to the left by the tumor. The liver and bladder were the seat of broken-down white foci.

An interesting point in the history of the case was the fact that in April last Dr. Gerster removed the left testicle, which he presented to the Society as a specimen of tubercle testis.

INHALATION OF A BLOW-GUN DART—SPONTANEOUS EXPULSION AFTER TRACHEOTOMY.

Dr. WYETH presented a blow-gun dart, consisting of a pin with a cotton wad attached, which had been swallowed by a boy 10 years of age on the 7th of September. Violent cough followed immediately after the dart was inspired, and the mother thought the boy would choke to death, but the symptoms of suffocation disappeared shortly, not to return again until the foreign body was coughed up. The patient was carefully examined by the family physician, who concluded the dart had reached the right bronchus, and when he was brought to New York, Dr. Wyeth, Dr. Elsberg, and Dr. Leaming were of the opinion that the foreign body was in the right bronchus, and consequently, on the 11th of September, Dr. Wyeth performed tracheotomy and searched for the body. He first introduced the little finger, and afterwards used a pair of forceps, opening them a quarter of an inch and pushing them forward a quarter of an inch in different directions, closing them, but failed to touch what seemed to be the object sought for. A piece of ordinary surgeon's wire, doubled, was also passed, but in vain. The wound was kept open until the 24th of September, the patient doing well, when another consultation was held with Drs. A. Jacobi, E. G. Janeway, and J. H. Ripley. Dr. Ripley thought the dart had become loosened, was coughed part of the way up, and fell again with the next inspiration into the left bronchus. The next day Dr. Wyeth enlarged the tracheal wound to insert a silver tube. The wound being open, he introduced the finger into the left bronchus to see if it might not be possible the dart had changed its position. This procedure, which was repeated twice, gave rise each time to violent expiratory efforts, which finally resulted in throwing the pin, with the wad attached, out of the mouth. The patient had not been fully under the influence of the anæsthetic; hence the irritative effects produced by inserting the finger into the bronchus. Dr. Wyeth was having an instrument made by which he hoped to be able, in cases of this character, to remove the foreign body by suction-force through a tube introduced into the trachea.

The PRESIDENT thought that, as a rule, foreign bodies were expelled from the air-passages by a violent expiratory effort, and it might be well, in cases in which the bodies were of a round form, to wait for them to be raised spontaneously. In cases like the one related by Dr. Wyeth, in which it was evident the point of a sharp body was upward, it would be safer to explore the trachea and bronchi. He once removed a spiral spring of a clothes-pin from the top of the larynx in a boy about five years of age, who was about to suffocate, using his finger as an instrument of extraction.

Dr. H. C. COE referred to the case of a young man who suffered from symptoms of consumption after swallowing a head of timothy. The foreign body was coughed up after about a year, and the patient completely recovered.

Dr. J. LEWIS SMITH referred to the case of a child which had fibroid pneumonia the result of inhaling a piece of hickory-nut-shell. Recovery took place after spontaneous removal of the nut-shell, at the end of three months from the time of its inhalation.

Dr. FURMAN knew a patient to recover from lung-symptoms after coughing up a piece of tooth which had been inhaled while he was under the influence of an anæsthetic.

TUMOR OF THE BREAST.

Dr. W. P. NORTHRUP presented a tumor of the breast which Dr. C. C. Lee had removed, at the Foundling Asylum, from a woman 45 years of age, the mother of ten children. The tumor began to develop just before the birth of her last child, and when removed, seven weeks after the birth of the child, was as large as an orange. The case had been seen by five or six eminent surgeons of the city, all of whom pronounced it one of malignant disease and recommended immediate removal of the breast. The tumor was nodular and hard to the touch; the nipple was retracted; there were a few enlarged glands in the axilla. When Dr. Lee cut into the tumor there spurted forth fetid matter to some distance, so tense were the cyst-walls, and all present thought he had cut into an abscess. He then removed the ragged walls, the tissue on the posterior wall being very hard; the anterior wall was quite thin. He did not remove the axillary glands. The prognosis was considered doubtful. The microscopical examination left some doubt as to the exact nature of the tumor, but Dr. Northrup and Dr. Delafield were inclined to think that

originally it was an adenoma, an abscess developing in its centre later. There were numerous giant cells in the specimen. The wound healed almost entirely by first intention. The axillary glands had diminished in size since the operation.

Dr. WYETH was disposed to regard the giant cells as an indication of sarcoma or of tubercle.

The PRESIDENT said the description of the case, as given by Dr. Northrup, corresponded almost exactly to that of a case in which he operated two years ago, removing a tumor from the breast and enlarged glands from the axilla. The cyst-walls in his case were also very tense. At that time he thought the prognosis good, but malignant disease had developed in the glands of the neck, and two operations were subsequently performed, and now the patient was dying of gradual suffocation and asthenia. He thought it would have been proper to remove the enlarged glands in the axilla in Dr. Northrup's case. He should regard the prognosis as very unfavorable.

ULCERATIVE ENDOCARDITIS.

Dr. J. LEWIS SMITH related the history of a case of ulcerative endocarditis, as follows: The patient was a girl 5 years of age, who two years before had had double lobar pneumonia, and two months before had had pertussis, but her health immediately before the fatal disease was good. She began to be sick on the 16th of August, with fever and loss of appetite. Pneumonia was suspected, but definite signs did not exist. Dr. Smith saw the patient nine days later, at which time he was unable to make a clear diagnosis. There were no physical signs of pneumonia; the heart-sounds and the urine were normal; the temperature in the groin was 104.5°, the pulse 150, the tongue dry and furred, respiration a little accelerated. That night, the 25th of September, the patient slept well and had two stools of the natural appearance; the pulse 160, the temperature in the groin 102.4°. On the evening of the 26th the patient had a copious evacuation of very dark blood. On the 27th the pulse 160; there had been one normal evacuation from the bowel. On this day the patient began to vomit, and continued to vomit nearly every day until death, the temperature varying morning and night from 101° to 105°. On the 4th of October the patient vomited blood. She died on the 5th, in a state of great prostration. There was some extravasation of blood under the skin on the last day of life. At the autopsy the mucous membrane of the stomach and intestines was mottled with extravasation of blood. There were some points of extravasated blood in the lungs and liver. In the anterior, and more or less in the posterior, lobes of the brain were extravasations, in some places filling the sulci. On the mitral valve was a polypus a quarter of an inch in length, and two other polypi were found on the heart-walls, covered with fibrin. The entire endocardium seemed to be much thickened. The polypi contained numberless micrococci.

Dr. H. C. COE referred to two cases of tumor of the abdomen, one having been diagnosticated as an ovarian tumor and the other as a cyst of the kidney. Examination of the blood showed that the patients were suffering from leucocythæmia, and they were thus saved the perils of an unnecessary abdominal operation.

PHILADELPHIA CLINICAL SOCIETY.

STATED MEETING, SEPTEMBER 26, 1884.

DR. CLARA MARSHALL read a "Report of Two Cases of Imperforate Anus, with Recto-Vaginal Fistulæ, in the Adult." The paper was reserved for publication by the reader.

A case of *Atresia Vaginæ with Retention of Menses* was reported by Dr. E. E. MONTGOMERY. Miss F., æt. 44, single, of healthy parentage, was brought to my office July 5, 1884, by Dr. Sibbald, of this State, with the following history. She commenced menstruating at sixteen, and continued without disturbance until her thirtieth year. Two years previously she had fallen upon a curb-stone, receiving quite serious spinal injury, which lasted a year, when she fully recovered. The menstrual periods, which were always regular, lasting from three to four days, normal in quantity and color, at thirty became painful. Since then the pain has been constant and increasing with each period. The discharge now lasts from seven to ten days, is of a dark bloody nature and offensive odor. During the menstrual intervals there is a continuous discharge of "corruption," as she calls it, necessitating the constant wearing of a napkin and producing excoriation. All of these symptoms have been increasing during the past eight years, and she has been compelled to discontinue work a week or more at a time. She complains of a sensation of weight or pressure in the pelvis, attended with severe pain during defecation. There is no pain during micturition. Her nervous system has become much affected.

Upon examination, the vagina was found relaxed and the external parts red and bathed with secretion. The vagina was about two inches long, ending above in a lateral cicatrix. No uterus could be felt. Upon withdrawal, the finger was found bathed with a dark, thick, highly offensive discharge. The use of a Sims speculum disclosed a cicatricial line running from side to side across the fundus of the sulcus, just posterior to which the membrane looked thinner. Slight press-

ure against this with a sound perforated it, and was followed by a profuse discharge of broken-down blood and pus. A pair of Ellinger's dilators was then introduced and spread to their full extent; over four ounces of the fluid flowed out. The cavity was then washed out with a carbolized solution. In this cavity, above the cicatrix, the uterus was found retroverted and firmly fixed, forming the roof. The cavity was dressed with carbolized glycerin on cotton. Subsequent treatment was conducted by Dr. Sibbald. He informs me that there has been no difficulty since, and that she now feels perfectly well.

Dr. W. H. PARISH: That the treatment adapted in this case was proper, the results showed, though it was not in accordance with the treatment directed by the text-books. We are there told to puncture the cavity with a trocar, and draw off the confined liquid drop by drop. This is undoubtedly wrong, and its disadvantages have been demonstrated in my own practice. The crucial incision is undoubtedly best.

Dr. COLLINS related the details of a case treated in the manner of the text-books by exploratory needle, trocar, and drop-by-drop drainage. The cartilaginous membrane acting as septum was one and a half inches from the vulva, and probably congenital. A crucial incision was made after drainage, and the corners cut off, and no further trouble was experienced by the patient.

Dr. MONTGOMERY, in closing the discussion, said, "As Dr. Parish has said, the free incision is best, though it was precipitated in the case related by an opening occurring during examination. The danger of septicæmia is certainly increased by a small opening. A particular point of interest in this case was the lateness in life and the time that elapsed between the injury and the retention."

G. BETTON MASSEY, M.D.,
Reporting Secretary.

REVIEWS AND BOOK NOTICES.

OSTEOTOMY AND OSTEOCLASIS FOR DEFORMITIES OF THE LOWER EXTREMITIES. By CHARLES T. POORE, M.D., Surgeon to St. Mary's Free Hospital for Children, New York; Member of the New York Surgical Society, etc. D. Appleton & Co., New York, 1884, pp. 187.

Dr. Poore has written a valuable history of osteotomy and osteoclasis, the methods of their performance and the diseases for which they are required. He has carefully, though by no means arbitrarily, determined the form of operation best adapted to each variety of deformity, and has succeeded in conveying these distinctions to the reader.

Rickets, the cause of most of these deformities, the author does not regard as an inherited vice of constitution, but as a general disease of the individual produced by malnutrition; and he claims that "bad air, improper food, and scanty clothing may make the healthiest child the victim of this disease."

He has found most of these deformities produced at the periods of rapid growth, before the seventh or between the twelfth and twentieth years, when the production of cartilage is more rapid than that of the earthy salts. The actual distortion he regards as entirely due to the weight of the body, and not to muscular contraction.

The author's views on one of the great questions of the day (if it can still be regarded as a question) are worth quoting:

"It has only been since the methods of treatment of wounds advocated by Mr. Lister that surgeons have felt justified in operating upon tissues with which their predecessors considered it too hazardous to interfere. Although much of the strict technique of Listerism has been abandoned, yet its fundamental principles have stood the test of time, —viz., cleanliness, drainage, and rest.

"In regard to the use of Listerism, I am clearly of the opinion that it affords no additional safety, and I have long since abandoned its use. I do not place my instruments in any antiseptic solution before using, and I do not regard it as essential to keep the wound damp with carbolized water."

He quotes Macewen, however, as dressing his wounds with iodoform and washing them out with carbolic acid.

After the above statement, one naturally turns to the table of results. We find that he has performed 91 osteotomies, of which 15, or over 16 per cent., suppurated, while of 1510 osteotomies collected from all sources, 109, or about 7 per cent., suppurated.

Dr. Poore prefers the osteotome to either Adams's saw or Shrady's modification, as it is less difficult to work, takes less time, and lacerates the soft tissues less.

After operation the limbs are at once straightened and put in plaster of Paris, to remain until bony union has taken place. He expects primary union of the wound, but observes it through a fenestra, as he does not rely upon the thermometer to indicate the presence of pus.

He considers it very unwise to correct deformities or to attempt to regain motion after suppurative coxalgia, and pronounces it very dangerous under any circumstances.

He found that out of 167 sections for coxalgia many suppurated, and 17 died. He prefers the long splint to permanent plaster dressings in sections about the hip.

The author treats his cases of genu valgum with splints or braces, if they reach him before hardening of the bone has occurred. This he determines by grasping the tibia

firmly at each extremity and trying to "spring" it. If it bends under these circumstances, he uses braces; if no improvement follows in a few months, he operates.

The mechanical treatment is not, however, very successful. He quotes one hospital service, where the patients are particularly well cared for, with only 23 per cent. of cures.

Ogston's operation seems to the author to be dangerous on theoretical grounds. Reeve's is difficult to perform, and it is occasionally impossible to slide the condyle up. Nor does he regard favorably Barwell's method of dividing femur, tibia, and fibula.

The author regards division just above the epiphysis as applicable to all cases of knock-knee dependent upon femoral changes. He gives a full description of all the operations, but considers that "Macewen's operation has superseded all others. It is easier to perform, is applicable to all cases, it is distant from the joint and its ligaments, and is near, if not at, the point of abnormal deviation."

He has modified Macewen's operation by omitting Listerism, flexing the leg instead of extending it, and differs in the method of treating the wound.

Of 622 cases of Macewen's operation there had been but three fatal cases, and in but one was the death due to the operation.

For genu varum the author advises osteotomy at the point of greatest curvature.

Dr. Poore fully reviews the history of osteotomy for angular anchylosis at the knee-joint from John Rhea Barton to the present time. He regards Buck's method, that of excising the entire joint by a cuneiform osteotomy, leaving a small portion of bone to protect the vessels, as the safest and best operation.

We have seen it necessary, when this operation has been performed, not only to excise the entire diameter of the bone, but to remove several further sections from either the femur or tibia, to straighten the limb, owing to the adapted shortening of the tissues posterior to the joint. This made the limb so much shorter as to convince us of the superiority of a section above, in Macewen's line.

In his cuneiform osteotomies for angular deformities of the tibia, the author makes a primary counter-opening posteriorly, keeping carbolized horse-hair in it for at least two days. Osteoclasis is now but seldom used except to correct deformities after fracture. In fifty-three refractures of the femur and twenty-four of the leg the results are reported as perfect.

The author prefers Rizzoli's osteoclast. With this instrument, he states, the point of fracture is entirely under the control of the surgeon, and is sharply transverse.

The author has performed seventy-four linear and seventeen cuneiform osteotomies. The deformity was corrected in all exeept two. Suppuration occurred in eight of the linear and seven of the cuneiform. There were no deaths directly from the operation.

He has performed osteoclasis thirty-four times, with perfect recovery in all.

He has collected 1510 cases of osteotomy: 1448 were linear and 62 cuneiform. Of the former 15 died, in 92 suppuration occurred, and in 17 there was some necrosis. Of the cuneiform osteotomies, 17 suppurated and 5 died.

The book is a most welcome and valuable contribution to surgery. J. M. B.

A Manual of Diseases of the Throat and Nares. By Morell Mackenzie, M.D. Lond. Vol. II.—Diseases of the Œsophagus, Nose, and Naso-Pharynx. 8vo, pp. 400, 93 Illustrations. American Edition. William Wood & Co., New York, 1884.

The book before us is the long-expected second volume of Dr. Mackenzie's comprehensive work on diseases of the throat and nose, which was to follow closely upon the appearance of the first volume, but was delayed until now by peculiar circumstances.

As the English edition has already received notice in these pages, we need not again refer to the systematic arrangement and lucid explanations which give this work special value for reference. We may observe, however, that the views expressed in regard to the pathology and treatment of nasal diseases are in some instances different from those held by most of the leading laryngologists of America, and it will be found that some of the later, but not unimportant, achievements attained by Americans are not mentioned, as, for instance, the treatment of hay-fever by the galvano-cautery, and the existence of cystic polypi in the nares, as reported by Lefferts and Seiler. We can, however, fully endorse the author when, in speaking of the treatment of nasal obstruction, he says, "'To cut through everything soft, to saw through everything hard, and to tie everything that bleeds,'—the spirit of this simple instruction in surgery has, I fear, in recent years sometimes influenced the young practitioner, and the nasal passages have occasionally been 'cleared' with a zeal and energy worthy of the industrious backwoodsman." More interesting than useful perhaps for the general practitioner are the chapters on rhinoliths, maggots, and insects in the nares, which accidents are so rarely met with, and then only in certain parts of the world, that their description has only been added for the sake of completeness. One of the great charms of the volume is the elegant and easy language in which it is clothed, making its perusal a pleasure rather than a labor. The wood-cuts illustrating the text are well executed, and add greatly to the appearance as well as to the value of the book,

and the general appearance is such as to do credit to the well-known publishing firm.

C. S.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, U.S.A. Authors and Subjects. Vol. V., Flaccus–Hearth. Government Printing-Office, Washington, 1884.

In announcing the fifth volume of the Index-Catalogue we can only express our congratulations to Dr. Billings upon the continued progress of this great work, which is an honor to America and American physicians. This issue contains more than 15,000 author-titles, representing 5755 volumes and 12,896 pamphlets; it also includes 8069 subject-titles of separate books and pamphlets and 34,027 titles of articles in periodicals. The greatest number of references appear appropriately under the Head and the Heart, the latter comprising no less than a hundred pages.

Such a list of references is very discouraging to authorship, and is well calculated to sprinkle thorns in the path of the painstaking essayist.

MEDICAL RHYMES, ETC. Selected and Compiled from a Variety of Sources. By HUGO ERICHSEN, M.D. With an Introduction by Prof. WILLIS P. KING, M.D. Illustrated. J. H. Chambers & Co., St. Louis. Cloth, 8vo, pp. 220.

In this collection of medical rhymes, wise and otherwise, there are some old friends and many recent aspirants for favor. The "Lines to a Skeleton" and the "Address to a Mummy," with Dr. Holmes's "Stethoscope Song" and Weir Mitchell's "Lines to a Deserted Study," are found in association with medical ditties, humorous or pathetic, and of varying interest and value. It is a book that will afford a pleasant half-hour to the traditional overworked doctor who comes home wearied with the drudgery of his daily round of practice.

A SHORT TEXT-BOOK OF INORGANIC CHEMISTRY. By DR. HERMANN KOLBE, Professor of Chemistry in the University of Leipsic. Translated and edited by T. S. HUMPIDGE, Ph.D., B.Sc. New York, John Wiley & Sons. 8vo. $2.50.

English readers will welcome this translation of the elementary text-book of one of Germany's foremost chemists, representing as it does the course of instruction followed in many of the German schools. The descriptive portions of the work are full and excellent, but the theoretical portions are not always as clear as could be desired, and are in some cases not strictly in accord with facts. "A salt is the substance produced by the union of a base with an acid" is a definition leaning rather to the old dual hypothesis than to an interpretation of the actual phenomenon occurring in the formation of a salt, and gives no idea as to the structure of salts. "Halogen bodies" and "haloid salts" are terms which would better disappear from chemistry than be perpetuated in standard text-books. Is it true that "the atom of oxygen possesses *two points* of attraction," while the atom of hydrogen possesses but one?

This book will prove of value to the student of chemistry, and as a small work of reference; to the general student, and especially for medical students, it is too full and laborious, although the reading is by no means difficult.

The illustrations, press-work, and binding are highly commendable.

G.

GLEANINGS FROM EXCHANGES.

MICROCOCCI IN RELATION TO WOUNDS, ABSCESSES, AND SEPTIC PROCESSES.—In a report to the Scientific Grants Committee of the British Medical Association, Dr. W. Watson Cheyne gives the details of some important experiments, the results of which he summarizes as follows:

"1. There are various kinds of micrococci found in wounds treated aseptically, differing markedly from each other in their effects on animals. They agree in growing best at the temperature of the body, and in causing acidity and sweaty smell in the fluids in which they grow. The experiments show that cultivations may be carried on in fluids with accuracy, provided the precautions mentioned be observed.

"2. The micrococci tested in these experiments grew best in materials exposed to oxygen gas. They grew only with difficulty in the absence of oxygen. Eggs were not good pabulum.

"3. Their effect on animals was not altered by growth with or without oxygen.

"4. The effects of these micrococci on rabbits and man were not similar, some of the most virulent forms for rabbits causing no deleterious effect in wounds in man.

"5. The kidney is apparently an important excreting organ for organisms.

"6. Organisms not capable of growing in the blood may yet cause serious effects by growing in the excretory canals. This may explain some cases of pyelitis.

"7. Where an organism is not markedly pathogenic, it may be necessary to introduce a large quantity before morbid changes are set up.

"8. Suppuration is not always due to micrococci; it may be caused by chemical irritants, such as croton-oil.

"9. Micrococci are always present in acute abscesses, and are probably the cause of them.

"10. In some cases, the micrococci are the

primary cause of the inflammation and suppuration, as in pyæmic abscesses; generally, however, they begin to act after inflammation has been previously induced.

"11. This inflammation may be caused by an injury, by the absorption of chemically irritating substances from wounds, by cold, etc.

"12. There are several different kinds of micrococci associated with suppuration.

"13. Micrococci cause suppuration by the production of a chemically irritating substance, which, if applied to the tissues in a concentrated form, causes necrosis of the tissue, but, if more dilute, causes inflammation and suppuration.

"14. The conditions in wounds and abscesses are not the same, inasmuch as in the former there is opportunity for mechanical and chemical irritants to work.

"15. There is no reason for denying the existence of 'antiseptic suppuration.'

"16. Tension may also cause suppuration, but it is perhaps most frequently aided by the growth of micrococci. These organisms need not be of a very virulent kind. It is also probable that the products of inflammation are themselves irritating and capable of exciting or keeping up inflammation.

"17. The micro-organisms of septicæmia, of pyæmia, and of erysipelas, are different from one another and from those of abscesses. In erysipelas, the micrococci grow in the lymphatic spaces. In pyæmia, they grow in the blood to form colonies and emboli. In septicæmia, they may only grow locally, the symptoms being due to the absorption of their ptomaines; or if they grow in the blood they do not form colonies and emboli. Septicæmia may also be due to other organisms besides micrococci.

"18. There are no facts to support the view that it is the same micrococcus which, under different conditions, causes these various diseases. The experiments of conversion of innocent into malignant forms, and *vice versa*, are unreliable."—*British Medical Journal*, October 4.

THE CAUSE OF CHOLERA.—A member of the Marseilles Cholera Commission has furnished the following summary of its conclusions thus far:

"1. The cholera is transmissible to the rabbit, as demonstrated by injection into the veins of the blood of a cholera-patient at the algid period. The rabbit died in twenty-four hours, with lesions entirely like those of cholera. 2. By cultivation, this blood after a few hours loses its infectious properties. 3. Injections of choleraic blood in the period of reaction, or a very advanced algid period, produce no effect. 4. The perspiration of a cholera-patient, injected into the veins, does not transmit cholera. 5. The stomachic or intestinal dejections, or the gastro-intestinal contents (the last full of comma-bacilli), may, after filtration, be injected with impunity into the cellular tissue of the peritoneum, the windpipe, the intestines, the rectum, and even into the blood. 6. Comma-bacilli taken from the intestines of a cholera-patient may be introduced into the intestines of a rabbit, and multiply there for more than eleven days, without producing any choleraic symptoms, and without necropsy revealing the anatomo-pathological lesions characteristic of cholera. 7. There is thus every proof of the non-specificity of the comma-bacillus. We experimented on bacilli taken from the intestine, and with dejections kept from two to twelve days, the results being always negative. Everything also proves that this bacillus does not produce in the intestine toxical ptomaines which would be the cause of poisoning,—namely, the lesion of the blood. The inference from more than fifty of these experiments is the non-contagiousness of cholera, which we maintained from the very opening of the discussions. 8. The minute examination made by us of the heart and large venous vessels of cholera patients enables us to affirm that there is no phlebocarditis in cholera, as alleged by Morgagni, and still maintained by many enlightened physicians. 9. Bulbar and medullary lesions, or those of the solar plexus, appear to us to be all secondary lesions. 10. In our opinion, the initial lesion of cholera takes place in the blood. 11. It essentially consists in the softening of the hæmoglobin, which makes some corpuscles lose first their clear shape, the fixity of their form, and the faculty of being indented. These corpuscles adhere together, lengthen out, stick together, and, in very rapid cases especially, some are seen which are quite abnormal, while others appear quite healthy. 12. The entire loss of elasticity of the corpuscle (which is shown by the preservation of the elliptic form when it has been stretched out) is, in our view, a certain sign of the patient's death. To stretch out a corpuscle, it is merely needful to alter the inclination of a plate on which a sanguineous current has been established in the field of the microscope. The fluid column stops at one point, whereas the rest continues to flow. An elongation of the intermediary corpuscles results, and then a rupture of the column. In the gap thus formed are some scattered corpuscles. If these revert to their primitive form, the patient may recover. If they keep the elliptic form, we have seen death follow in every case, even if the patient's symptoms were not serious at the time of the examination of the blood. At the outset, and in the rapid cases, which give the clearest results, corpuscles remaining healthy are seen alongside the unhealthy ones, and assume the shape well known in heaps of money, or maintain their liberty. When currents are created in the field of observation, the columns of healthy,

or less unhealthy, corpuscles remain stationary, or nearly so; whereas the unhealthy corpuscles flow between the columns or the stationary masses like fluid lava. This we believe to be the characteristic lesion of cholera. By hourly examination of the blood of cholera-patients the progress of the malady can be mathematically followed. First some corpuscles are unhealthy, then one-third, then half, then two-thirds, and lastly death supervenes. A very important fact in our view is that all the corpuscles are not simultaneously affected. We debar ourselves from substituting a fresh hypothesis for all those we have overthrown. We confine ourselves to saying that we know better than our predecessors what the cholera is not, but we do not know what it is."

Treatment of Lupus by Pyrogallic Acid and Mercurial Plaster. — Dr. Schwimmer reports (*Wiener Med. Wochenschrift*) that after trial of the various methods of treatment upon lupus patients, he has found none which, *when employed singly*, can be pronounced suited to every case. Severe local measures are capable in certain cases of doing more harm than good. Among the most useful means of treatment must be reckoned pyrogallic acid. Applied in the form of an ointment (10 to 15 per cent.) three or four times daily, it soon transforms the morbid growth into a pulpy, grayish substance. Although the cicatrix looks clean after this treatment, it almost always contains tubercles, which in many cases renew the disease. To prevent this result he hit upon mercurial plaster, which he employed in conjunction with the former. The pyrogallic acid is seldom able to produce the total destruction of the lupus tissue alone, and it is well known that the gray plaster has little influence upon the lupoid infiltration by itself; but by using the acid to destroy the lupus tissue, and the plaster afterwards to promote absorption, they act very efficiently. In a series of very malignant cases he pursued with success the following course:

For several days after admission the diseased surfaces were kept completely covered with vaseline smeared on cloths, in order to facilitate the removal of all secondary morbid products, such as scabs, etc. A ten-per-cent. pyrogallic ointment was then applied over the same area, and renewed two or three times in the twenty-four hours. This dressing was employed from four to six days, or, in cases where the cutaneous tissues were insensitive, for six or seven days. On its removal, vaseline was again applied for one day, after which the entire suppurating surface was covered with mercurial plaster. Healing began in from ten days to a fortnight in most localities, but isolated nodes and tubercles could still be detected in the cicatrized integument. Pyrogallic acid was now once more applied for three or four days, causing renewed suppuration of the partly-healed infiltrations, while those more firmly skinned over remained unaffected. When treatment was repeated, so much pain in many cases was experienced on the second day that mercurial plaster had to be at once substituted for the ointment; but if this was not the case, the latter was left on for two days longer. The gray plaster was allowed to remain—being changed once daily if the suppuration was trifling, twice or thrice if it was more profuse—until cicatrization was complete, which sometimes required four weeks. When the complaint was peculiarly indolent and obstinate, the same process was gone over for a third time, but treatment never extended further than this.

An accurate and unprejudiced comparison of the results obtained in this way, with those following other methods, has proved decidedly favorable to the former. A speedier and much better resolution of the most advanced and wide-spreading morbid growths was found to occur under the combined pyrogallic and mercurial treatment, than could have been brought about by the united agencies of scarification and the thermo-cautery.

In conclusion, he states that, in order "to make our estimate more precise, and to obviate any misconception which might cause the means I have recommended to be regarded in the light of a *lupus-panacea*, I present the following summary of the objects which they may reasonably be expected to accomplish:

"1. The severest and most extensive forms of lupus—those hitherto most difficult and frequently impossible of management—may often be essentially ameliorated by these simple and comparatively painless procedures.

"2. The application of mercurial plaster, immediately after several days' use of pyrogallic acid, is able to bring about complete absorption of the tubercles and infiltrated cells at some points, while at others it is remarkably effective in arresting the morbid growth and forming complete and smooth cicatrices, results which are not attained by the use of either remedy alone. The combined treatment may be employed two or three times in succession without any inconvenient consequences.

"3. The more circumscribed forms of lupus are *less* amenable to this method than the diffuse, serpiginous, and ulcerated varieties,—perhaps for the reason that in the latter the corium affords a less congenial breeding-place for the morbific cells. Yet sometimes, in these same cases, better results are obtained through a previous deep scarification of the affected parts, although scarification alone will prove entirely ineffectual.

"4. The duration of treatment is shorter than under the other methods, not exceeding three or four months in the worst cases.

"5. Relapses are to be looked for here no less than after other processes, but are least to be apprehended when the treatment has been thoroughly carried out,—*i.e.*, has terminated in uniform and complete cicatrization.

"6. This method is indicated in the most extended forms of lupus, whether occurring on the face, the body, or the extremities, and is especially suitable in neglected cases which have received no previous treatment.

"7. The affected surfaces, after healing, retain their redness for a considerable period. The discoloration gradually fades, however, and its disappearance can sometimes be hastened by using an ointment of bismuth or zinc."—*Glasgow Medical Journal*, October.

ARE HARMLESS MICRO-ORGANISMS EVER CONVERTED INTO DISEASE-GERMS?—In Dr. Klein's report to the medical officer of the Local Government Board, this distinguished and skilful investigator discusses the theory of the attenuation of virus, and that which has been advanced of late, whether or not a pathogenic organism can be developed from a non-pathogenic one. Buchner having declared that the bacillus of hay-infusion could be converted into that of anthracæmia, Dr. Klein demonstrates the fallacy of this, and shows how the mistake was probably committed. The statement that the jequirity bacillus is a derivative of an ordinary bacillus has been disproved by a number of other experimenters besides Dr. Klein, and the other view, that ordinary mould fungus when cultivated at high temperatures and in alkaline media can be converted into pathogenic material, has also been denied by Gaffky, Koch, and Leber. The spores which flourish under such circumstances are not spores of common mould, but of certain species of aspergillus, which is known to possess pathogenic qualities. With regard to the theory of attenuation, Dr. Klein does not agree with M. Pasteur in his statement that a culture of bacillus anthracis which has become inactive for sheep will yield further cultivations of the same character. Klein, on the contrary, declares that such cultures, under favorable circumstances for development, always regain full virulence. Dr. Klein attributes the diminished virulence to some collateral product which exercises an inhibitory effect upon the development of the organisms: when fresh culture-fluids are inoculated with these enfeebled cultivations, however, these new fluids at once attain full virulence. The substances which exercise an inhibitory influence are supposed to be analogous to the aromatic bodies which come into existence during the course of ordinary putrefaction. The question of the relation of micro-organisms to each other, as well as to diseased conditions, is yet, to a great extent, in a confused condition for the want of more knowledge of the natural history of micro-organisms. In these reports Dr. Klein has contributed the fruits of much laborious investigation to elucidate the subject.—*British Medical Journal*, October 11.

THE QUESTION OF HOME STUDY BY SCHOOL-CHILDREN.—An English court has recently decided that there can be too much study on the part of scholars, under this state of facts: A teacher had prescribed certain lessons which would have to be learned at home, and when the scholar had failed to commit them to memory he inflicted punishment, the character of which is not stated, but which gave rise to a charge of assault and battery against the teacher. The case came before two courts for judgment, and both of them decided that "home lessons set by teachers cannot be enforced." The question of the propriety of giving lessons which must be studied at home, especially in the case of young and growing children, has been very often considered by writers on health subjects, but the legal aspects of the case have not been brought up frequently, and, so far as is known, not at all in this country. The question, if it arose at all here, would come up in connection with the public schools, as there would be no jurisdiction over private schools in this regard. Should it be settled as the law that lessons must not be given requiring home study, it would necessitate having ample time for study during school hours in addition to recitation hours, and it may be a question whether this lengthening of school hours would not be as injurious to health as study at home.

BULLET-WOUND OF THE BRAIN, WITH RECOVERY.—The inhabitants of Uruguay, from their out-door life and exemption from the debilitating influences of high-pressure civilization, possess wonderful recuperative power when injured. Dr. H. Parsons reports a case of a girl, thirteen years of age, who was shot by a playmate with a small-calibre revolver; the bullet entered the mastoid process of the right temporal bone, and took a course inward with a slight downward direction. A probe was introduced six inches into the wound, when it impinged upon a hard substance, which might have been either the ball or the opposite side of the skull. The patient fell as soon as she was shot, but recovered consciousness within an hour, when there was internal strabismus of the left eye and complete loss of power over the left arm and leg, but without being accompanied by loss of sensation. There was considerable hemorrhage from the site of the injury, which was situated just behind the right ear. The wound was dressed with iodoform, cotton wool, and cold compresses. A few doses of bromide of potassium were given internally. The dressing was removed in a few days, when the wound was found to be healed, without any pus or surrounding inflamma-

tion. She was out of bed in a week, and in a month had regained the use of her left leg, and a few weeks later of the left arm. She is now, eighteen months after the accident, apparently perfectly well.—*British Medical Journal*, October 18.

Practical Hygiene.—Dr. Louis W. Atlee contributes a timely article to the October issue of the *Journal of the Franklin Institute* upon "Our Clothing and Our Houses," in which the wardrobe and tenement are submitted to critical examination, and some popular errors and defects condemned. Clothing should protect from the weather and retard heat-radiation from the body without too greatly interfering with the excretory functions of the skin or depriving the body of access to the fresh air. Houses should likewise aid in maintaining the normal temperature, furnish protection from storms, and yet not deprive the organism of oxygen. Dampness is a fruitful source of sickness, and when filth and overcrowding occur under certain conditions of heat and moisture, epidemic disease finds a congenial breeding-place. Many tenement-houses and even private dwellings appear to have been constructed with almost criminal disregard to the health of the occupants. We think that the attention of the public cannot be too strongly or too frequently directed to the fearful penalty which must follow disobedience of the first principles of sanitary science.

Jequirity in Skin-Diseases.—Dr. J. Shoemaker (*Lancet*, August, 1884, p. 185) contributes an able article on "Jequirity (Linnæ): and its Use in Disease of the Skin." Cases are cited, showing the results met with in the treatment of ulcers, lupus, etc. The author sums up by pronouncing jequirity a most powerful agent, applicable to most cases of unhealthy ulcerating and granulating conditions. It exercises a destructive tendency, followed by a constructive change, which leads to a rapid development of healthy tissue. The remedy should be applied with caution, as it may give rise to alarming symptoms, such as erysipelatous inflammation, and in weak and irritable patients to great constitutional disturbance. These symptoms, however, will speedily subside with proper attention and on the drying of the crusts. To prepare a proper solution of the beans, the following directions are given. "Two hundred grains are decorticated by being slightly bruised and cracked in a mortar, the red hulls are carefully picked from the cotyledons, and, in a bottle, covered with distilled water. They are thus macerated for twenty-four hours, when they are again transferred to a mortar and reduced to a smooth paste, and then sufficient water is added to make the whole weigh eight hundred grains." The emulsion is then applied to the ulcers, etc., by a camel's-hair brush. Several strikingly successful cases of lupus, scrofulous, indolent ulcers, venereal and epithelial ulcers, are recorded, illustrating the great value of the drug in such cases.—*London Medical Record.*

Fever of Growth.—In a paper published in the *Gaz. Hebdom. de Méd. et de Chir.*, No. 34, 1884, the author reports several cases of this affection, which has been already carefully described by Bouilly, Guillet, and others. It is most frequent between the ages of seven and fifteen, and seems to be generally caused by some unusual fatigue or exertion. The chief symptoms are fever, pain about one or more joints, and rapid increase in length of the body. The fever varies in degree, duration, and character, but the temperature generally reaches 40° C. (104° F.). The pain, which is much increased by pressure, is localized in some typical situations, such as the epiphyses of the long bones, and more especially of the femur. There may be some effusion into the neighboring joints, but never to any considerable extent. The third symptom is sometimes very marked, and Auboyer has reported a case in which the patient had grown fifteen centimetres in two months. According to M. Reclus, the disease is a mild form of osteomyelitis. The diagnosis requires to be made chiefly from acute rheumatism and from destructive inflammation of the joints. —*London Medical Record.*

The Use of Resorcin in Skin-Diseases. — Andeer (*Monatshefte für Prakt. Dermatologie*, No. 5, 1884) has found resorcin to be a valuable remedy in eczema. He relates the history of a case in which a boy, 18 months old, suffered from a painful eczema of the head and face, which prevented him from either laughing or crying, and rendered restraint necessary to prevent his tearing himself. The treatment consisted in rubbing in vigorously, once a week, an ointment of resorcin with vaseline, beginning with five per cent. and going up gradually to eighty per cent. in strength. The disease yielded entirely to this treatment.—*London Medical Record.*

Cholera.—The sudden and extensive outbreak last week in the city of Paris, after the epidemic in the south of France had been officially decided to have reached its end, gives an additional argument to those who have all along maintained the doctrine of the essential identity of the present with former epidemics of Asiatic cholera, and is a warning to us to put our houses in order for the visitation, which will in all probability be upon us early next year. We hope that proper hospital arrangements will be made to accommodate a large number of sufferers who may suddenly claim medical care, as they did in former epidemics.

MISCELLANY.

PENNSYLVANIA HOSPITAL.—On last Monday evening a notable ceremony was held at the Pennsylvania Hospital, the occasion being the restoration, after an absence of fifty years in another department of the institution, of the celebrated picture of Christ Healing the Sick in the Temple, which had been originally painted for and presented to the hospital by Benjamin West. This canvas is now most appropriately hung in the clinical amphitheatre, facing the audience, over the doorway through which the patients are brought. Dr. Thomas G. Morton, of the hospital staff, upon the unveiling of the picture, gave a brief but interesting account of its history, and was followed by Mr. John B. Garrett, representing the Board of Managers, in an able address, in which the growth of the hospital and its present usefulness were presented. A large audience of invited guests of both ladies and gentlemen was present.

THE MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA, at its stated meeting held November 11, considered some questions of present interest connected with a recent criminal case before the courts, in which a prisoner on trial for the murder of his keeper had set up the plea of insanity. Two papers were read,—one by Dr. Charles K. Mills on the case of Joseph Taylor, the other by Dr. H. C. Wood on "The Absurdities of the Law as Illustrated in the Taylor Case." An interesting discussion was held, in which the President, George W. Biddle, Esq., District Attorney Graham, Drs. Robinson, Packard, and Cohen, and Messrs. Carson and Shapley participated.

POISONOUS CHEESE.—Cases of cheese-poisoning are attributable, according to Dr. Vaughan (*Proc. Am. Pub. Health Assoc.*), to a chemical substance soluble in alcohol, the production of which is attributable to the rapid growth of the Bacillus subtilis. As it is present in new cheese, the difference between the poisonous and non-poisonous is one of degree rather than of kind.

HYDROCHLORATE OF COCAINE, the new local anæsthetic (in four-per-cent. solution) has been received and is for sale by Eisner & Mendelson, importers, No. 320 Race Street, Philadelphia.

DR. HENRY LEFFMANN has been appointed Physician to the Port of Philadelphia by Governor Pattison.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 26, 1884, *TO NOVEMBER* 8, 1884.

ALDEN, C. H., MAJOR AND SURGEON.—In addition to his duties at Fort Snelling, Minnesota, to perform the duty of attending-surgeon at Department Headquarters. S. O. 127, Headquarters Department of Dakota, October 23, 1884.

SPENCER, W. C., MAJOR AND SURGEON.—Ordered to Fort Trumbull, Connecticut, for duty as post surgeon, relieving Assistant-Surgeon Wm. J. Wilson, U.S.A., who will report at Department Headquarters and await further orders. S. O. 227, Department of the East, November 5, 1884.

TOWN, F. L., MAJOR AND SURGEON.—Assigned to temporary duty as post surgeon, Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

BENTLEY, EDWIN, MAJOR AND SURGEON.—To be relieved from duty at Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

WILSON, W. J., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Trumbull, Connecticut. S. O. 220, Department of the East, October 27, 1884.

CORBUSIER, W. H., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Bowie, Arizona Territory. S. O. 99, Department of Arizona, October 22, 1884.

CORBUSIER, W. H., CAPTAIN AND ASSISTANT-SURGEON.—Ordered to Fort Grant, Arizona Territory, for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

LA GARDE, L. A., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Ellis, Montana Territory, relieving First-Lieutenant G. E. Bushnell, Assistant-Surgeon U.S A., who, upon being relieved, will report for duty at Fort Snelling, Minnesota. S. O. 126, Department of Dakota, October 22, 1884.

HOPKINS, WM. E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered to Fort Lowell, Arizona Territory, for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

EGAN, PETER R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Lowell, Arizona Territory, and ordered to Fort Bowie, Arizona Territory, for duty as post surgeon. S. O. 102, Department of Arizona, October 30, 1884.

EVERTS, EDWARD, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 107, Headquarters Division of the Pacific, October 21, 1884.

MCCAW, WALTER D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered from Fort Craig, New Mexico, to Fort Wingate, New Mexico, for duty. S. O. 92, Headquarters District of New Mexico, October 21, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM OCTOBER 26, 1884, *TO NOVEMBER* 8, 1884.

Surgeon GROVE S. BEARDSLEY, to Washington, D.C., for examination preliminary to promotion, and as to qualifications for sea duty, October 31, 1884.

P. A. Surgeon THOMAS C. CRAIG, to the "Alliance" for temporary duty, October 31, 1884.

P. A. Surgeon JAMES E. GARDNER, to the Naval Hospital, Norfolk, Va., October 28, 1884.

P. A. Surgeon JOHN H. HALL, from the Naval Hospital, New York, to the Navy Yard, Mare Island, California, October 29, 1884.

Medical Director WILLIAM T. HORD, to continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

P. A. Surgeon P. A. LOVERING, to the Naval Dispensary, Washington, D.C., for temporary duty, October 27, 1884.

Medical Director THOMAS J. TURNER, to continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

P. A. Surgeon JOHN M. STEELE, to the Naval Hospital, New York, October 29, 1884.

P. A. Surgeon THOMAS C. CRAIG, to the "Alliance" for temporary duty, November 1, 1884.

P. A. Surgeon ROBERT SWAN, detached from the Naval Hospital, Norfolk, Va., and placed on sick-leave, November 3, 1884.

WIEBER, F. W. F., appointed Assistant-Surgeon, November 3, 1884.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 29, 1884.

ORIGINAL COMMUNICATIONS.

REMARKS ON CLINICAL CASES.

Delivered at the Pennsylvania Hospital, November 15, 1884,

BY J. M. DA COSTA, M.D.,

Professor of Theory and Practice of Medicine in the Jefferson Medical College.

Reported for the PHILADELPHIA MEDICAL TIMES.

THE TREATMENT OF HYPERPYREXIA BY COLD APPLICATIONS TO THE ABDOMEN.

GENTLEMEN,—The case now before you is one of typhoid fever, only remarkable for a sustained high temperature persisting in spite of various remedies. The temperature in the morning was 103° F., and occasionally 102°, in the axilla, but for nearly a week the evening temperature remained at 104°; one night it was 104.8°. As there had been no marked exacerbations in the temperature, we looked upon it as a case of grave character, on account of the sustained fever. With reference to the intestinal lesions, as manifested at least by the occurrence of symptoms of bowel-disorder, they were not severe: he had only three or four stools a day. The eruption was well defined, but there is nothing in the case to which I wish to call your attention besides the temperature record.

Let us see his present condition. His temperature this morning is 100½°; last night it was 101½°. I therefore think that the disease is yielding. The bowels have not been opened for thirty-six hours, and tend to constipation. He is very deaf, but obeys intelligently when I can make him hear. His tongue is moderately dry and slightly fissured; it is tremulously protruded. I want you to observe this cracked, dry condition, with the yellowish coating upon it: though it is not very dry, it still impresses you as a dry tongue. His abdomen is rather prominent and tender; a few spots of eruption are still visible upon the surface. There has been some atony of the bladder, so that the urine has had to be frequently drawn with the catheter. Examining his heart, I notice that there is almost complete extinction of the first sound; it can just barely be heard. The pulse beats now only one hundred in the minute, even with the excitement of coming before you; but, as I see upon the record, it has never been a rapid pulse. It is compressible, but has decidedly more volume than it had a few days since. His general condition is improving with the reduction in the temperature. He has been taking dilute muriatic acid (gtt. v) and turpentine (℥x) every two hours. He also takes twelve grains of quinine daily; and six ounces of wine and six of whiskey: therefore he is freely stimulated. His food consists of milk and beef-tea, two pints of each in the twenty-four hours.

Now I have given you a statement of his treatment, with a single exception, and that is what I wish to develop in our discussion,—viz., the treatment of the high temperature. When I found that this man had, a week ago, an evening temperature remaining persistently at 104°, I tried to reduce it by large doses of quinine,—sixteen grains daily; and on one day he took ten grains morning and evening. He was also frequently sponged with cold water. The effect was but slight; the temperature remained high. I then directed that cloths wrung out of ice-water should be laid upon the abdomen until the desired result was obtained. It was found that this was more efficient, and the temperature was at once reduced to 100°, so that by this means we were enabled to keep the temperature within bounds, and thus to gain time. We discussed the expediency of putting him in a bath, but, as he was very weak, and the bath-room is some distance from his bed, rather than subject him to the risks of so much handling, we yielded the point, though, if the bath had been more convenient, I would have preferred it. I wish to call your attention especially to the use of ice-water applications to reduce temperature, as a substitute for the large doses of quinine, and cold baths, which are not always convenient. It is a most instructive case. Indeed, I consider that the man's life has been saved by this means. Taking into consideration the rising temperature and the failing circulation, as shown by the impaired heart-sounds, it did seem likely that the case would not get well. I would also call your attention to the fact that in this case the quinine failed to reduce the temperature. It does not often fail, but it did here.

Another point is this deafness which you have observed. I almost had to shout to him before he put his tongue out. The resident physician tells me that he has been so ever since he came in; therefore it was not the effect of the quinine. Deafness in typhoid fever is not uncommon, and I may state that it does not contra-indicate the use of quinine; by no means. It is due to the state of the blood and the impaired nervous system. We also note here that he has a constant tendency to stupor, is rather drowsy and heavy; he sleeps well at night without opium; he has not been delirious, and has not suffered with headache. The deafness, therefore, is the only symptom referable to the nervous system. There is very little if any jerking of the tendons or tremor.

Now, gentlemen, with regard to the treatment, I shall make a slight modification. Quinine need only be given in tonic doses. We will order him to take eight grains daily. The dry tongue indicates that the turpentine is still useful; the amount of acid is so small that it does not make much difference whether it be continued or not, but, as it is grateful to the stomach and aids digestion, we will continue it also. Sponging of the general surface with water will be done several times a day, as heretofore; and if the temperature again rises we will return to the ice-water applications. With regard to the amount of stimulant, although it seem large, yet I will not yet reduce it, on account of his dry tongue and weak heart. I think that just now it would be dangerous to make any change.

HEART- AND KIDNEY-DISEASE DEPENDENT UPON LEAD-POISONING.

I made some remarks upon this case at the last clinic. I then told you that it was a case of lead-poisoning, heart-disease, with lung-complication and contracted kidneys. He is a fresco-painter, 48 years of age, and told us that he had had several attacks of lead colic from the inhalation of white lead, which he sometimes uses in his business to dust on a fresh-painted surface. He had the blue line upon his gums. He was vomiting at our last meeting, and I gave him, as you remember, a mixture of carbolic acid (gr. $\frac{1}{4}$), morphia (gr. $\frac{1}{32}$), in equal parts of mucilage of acacia and peppermint-water. Now his sick stomach has passed away, although his tongue is still coated and his bowels are constipated. He has also been taking strychnia (gr. $\frac{1}{50}$, t.i.d), which appears to have been useful, as he says that he feels better.

I find, upon listening to his chest, that he has a dilated heart, for which the strychnia is pre-eminently a good remedy, and, moreover, it acts as a tonic upon the nervous system, and locally upon the digestive apparatus. The question now is, Is the dose large enough? I think not. We will make it a thirtieth of a grain three times a day. Just here also arises this question, whether or not, considering the state of the kidneys and the fact that his stomach is now in better condition, it is advisable to give him something besides to act more directly upon the kidneys. I think so. We will give him Basham's mixture, two drachms thrice daily, and if we find that it is tolerated by the stomach we can increase it to a tablespoonful.

I will now call your attention to some interesting points in the pathology of this case. First, we have the history of lead-poisoning, his statement being that he believed that it entered his system by inhalation while dusting on white lead with his hands in fresco-painting. Lead enters the system by many different routes,—through the lungs, as well as through the skin. People who labor in lead-works sometimes come home and eat with dirty hands, and thus introduce the lead into the stomach, or it may be in the drinking-water. One or two small doses of lead of course do not do much harm, but the persistent, continuous introduction of lead produces poisoning. In this case it may have been introduced by the bronchial mucous membrane.

This was one of the points. The others are these: What connection exists, if any, between the structural lesions which we find here in the heart and the kidney? Lead is a factor in the production of disease of the kidney which is often overlooked. Lead produces chronic renal disorder, leading to contracted kidney, and persons who drink water from lead pipes often get Bright's disease in this way. I cannot tell you how many cases I have seen of this kind, since my attention was first directed to this subject, where chronic tubal nephritis had been set up by the action of the lead. It causes a slow process of inflammation in the kidneys, leading to degenerating epithelium and increase of connective tissue, with secondary changes, the most marked being contraction.

As regards the disease of the heart, it is certain that similar changes to those in the kidney may be set up in the walls of the heart, connected with its growth, causing either atrophy or hypertrophy of muscular structure with or without increase of fibrous tissue as a result of the presence of lead in the system. The lung-complication is due to passive congestion, owing to the state of the circulation and heart-failure, and this is also the explanation of the gastric disturbance. You possibly may think that I might improve on this treatment by giving iodide of potassium instead of Basham's mixture, but I am quite sure that the stomach will not tolerate it at present. I may, however, order it should he seem able to bear it.

ACUTE ERYSIPELAS: REMARKABLE RESULT FROM PILOCARPINE.

I have here a case to show you which I think will interest you, as it brings out rather a novel treatment of erysipelas. I intended to exhibit this to you this morning as a case of erysipelas, but I find that the erysipelas is gone. I, therefore, can only speak of the treatment, which has proved more quickly efficacious than I supposed it would.

This man, B. K., 32 years of age, a fireman, was admitted only day before yesterday. This is the record upon admission: "He says that he was quite well yesterday (November 12), but did not go to work, as he was celebrating the election. In the evening, according to his statement, he was not drunk, though he had been drinking a little, and became engaged in a very earnest political discussion, when some one, equally earnest, struck him in the right eye, making a bruise on the cheek and a small lacerated wound of the eyebrow," the evidence of which you may see for yourselves. The man at that time was quite well, although under the influence of liquor. "During the night he had much pain in his eye, and in the morning the eyelids were œdematous and the cheek likewise swollen, red, and burning." When he applied for admission the inflammation was confined to the right side of the face, but it spread rapidly, and the same afternoon both eyes were closed. It is worth adding to this history that he had slept out all Wednesday night after receiving the injury. He was admitted on Thursday morning with erysipelas of the upper part of the face, which was rapidly spreading over the brow. His pulse was 80; temperature, 102.8°; respiration, 22. The urine was examined with a negative result. He was ordered tincture of the chloride of iron, twenty drops every three hours, but only received one dose; as the disease was rapidly spreading, and something was needed to make a prompt impression, I used another and more active agent. This was not the first case in which I had used this remedy, but it was the first in which I obtained such rapid relief. He received hypodermically one-sixth of a grain of the muriate of pilocarpine. The result was remarkable. Here is the temperature record: the temperature fell from 102° to 99½°. He sweat profusely for an hour and a half, and there was no further development of the erysipelas; not only did it not spread further, but what did exist quickly subsided. No local treatment was employed, not even cold applications; therefore whatever success was obtained was from the pilocarpine.

I call your attention to this treatment of erysipelas. I said that it had not been my first case, although it was the most striking case I have seen. As long as five years ago I used jaborandi in the treatment of erysipelas until sweating was produced, and, I thought, with the result of checking further development. In one case with high temperature the disease had already made some headway, and did not subside so quickly. Under the use of iron the disease had not been controlled, but the fluid extract of jaborandi, given every two hours, checked it. I have since used the jaborandi in connection with the iron at times with good results. This is, therefore, not a new treatment with me, as I have used it for some time. Jaborandi and pilocarpine, its active principle, are, of course, similar in their effects.

I have called your attention to this treatment not because I believe that it will be followed by the same result in every case, but because it is worthy of a trial. If you get a case of erysipelas in its beginning, use pilocarpine. It has saved this man a long and dangerous illness, and, as he had been drinking, as he says he had, the results might have been serious. In the use of this treatment it should be borne in mind that, in order to be fully effective, profuse sweating must be produced.

TWO CASES OF MALARIAL CACHEXIA.

I have next to show you two cases somewhat similar, and I will have them both in together. I will be able to merely finish the clinical record of these cases to-day, and must defer any extended remarks upon them to another occasion. They are both instances of malarial cachexia.

This one is Charles Z., 29 years of age, a German, who works at china-painting. He says that he works with metallic pigments, but not with lead. He states that he is temperate, and usually healthy. He came to this country about ten months ago and went to work as a clerk in a store near Charleston, South Carolina, on James's Island. After he had been there a couple of months he suffered with headache, chills and fever, and prostration,—undoubtedly a malarial impression. He took medicine, but with temporary relief, and was obliged to leave. He came to Philadelphia, and two months later he entered this hospital for treatment for intermittent fever, and remained here nearly three months. The notes taken at that time only speak of him as a malarial subject. When he left here he was weak and pale, but did not have chills. Subsequently he suffered with increasing weakness, loss of appetite, and irregular fever. The malarial poison had evidently not been entirely eradicated.

He was re-admitted November 12. Two weeks before this he had headache and fever, and was obliged to give up his work. Upon admission he was slightly jaundiced, as you may still observe. His tongue was pale and his lips looked pale. The appetite was fairly good, bowels generally constipated. His urine contained bile-pigment, but was not albuminous; it was acid, sp. gr. 1020, and contained phosphates in excess. His anæmia is still quite marked. He has a slight cough. I find that his lungs are clear upon percussion; and upon auscultation I can only find anteriorly some harshness of respiration upon the left side, and posteriorly there is diffused harsh breathing on the right as well as the left side. He has, therefore, some catarrh of the bronchial tubes. He has no expectoration. There is no disease of the heart, which, however, is rapidly acting under the excitement of the moment. There is no murmur; the first sound at the left base is murmurish, but is not distinctly replaced by a murmur. The heart is not enlarged. The splenic dulness extends below the margin of the ribs about a finger's breadth; also is it increased towards the median line, below the costal border. It does not extend markedly upwards. Hepatic dulness is very slightly increased over the left lobe. There is no ascites.

A microscopic examination of the blood showed that the number of the cells is reduced, while the relative proportion of the white and red corpuscles is preserved, and the corpuscles are not changed. The case is one of pure anæmia accompanying malarial cachexia with slightly enlarged spleen. This man is taking at present sulphate of iron with carbonate of potassium (gr. jss each) in a pill three times daily. He has a good appetite, and has had no chill at all since admission; his temperature also is normal. In addition to this treatment, as his condition is good and his bowels constipated, we will give him, in a pill, podophyllin, gr. $\frac{1}{8}$, extract of hyoscyamus, gr. ij, each night, and an additional pill in the morning if needed.

The second case is one which you do not see quite in the intensity that it exhibited upon admission. He entered the ward on November 7. He is 19 years of age, and had worked on a farm near Baltimore until ten weeks before, when he was taken sick with tertian intermittent. This was temporarily stopped by quinine, but afterwards the chills returned each day. The malarial cachexia was marked upon his admission. There was marked enlargement of the liver, the percussion-dulness extending two inches below the border of the ribs. But more marked even than this enlargement of the liver was the enlargement of the spleen, which still exists. The area of splenic dulness extends downwards to within one inch of the crest of the ilium and half-way across to the umbilicus. There is a little general soreness upon pressure over the region of the spleen. The urine has been examined, and, while it is high-colored, it does not contain either bile or albumen. The tongue is clean, moist, and not coated as in the preceding case. Bowels are rather loose now, but were not so upon admission into the hospital. He has no cough. He, too, is anæmic-looking, although not to the degree of the other case. His conjunctiva is clear. He had been taking sixteen grains of quinine daily, which were reduced to ten grains on the 10th, and, as he has noises in his ears,

we will now reduce it to six grains daily. He is also taking Basham's mixture.

What will especially interest you in this case of malarial cachexia and enlarged spleen is that he has marked leucocythæmia. An examination of his blood showed a decided increase in the relative proportion of the white cells: from thirteen to seventeen appeared in each field. So that you have here an illustration of leucocythæmia with malarial cachexia, as you also have one of pure anæmia with malarial cachexia, moderately enlarged spleen and liver, and slight jaundice.

What makes the second case more interesting is that there is an actual decrease of the red blood-cells by about one-third, not only an excess of the white but a decrease of the red. This is his first attack. It is remarkable that such changes should take place in the spleen and blood in the short time that he mentions: probably he had been the subject of chronic poisoning from living in a malarial district, but the disease did not manifest itself openly until the time he stated, when he found himself unable to continue his work.

THE PATHOLOGY OF BRONCHO-PNEUMONIA.

BY FRANCIS DELAFIELD, M.D.,

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Read before the Pathological Society of Philadelphia, October 23, 1884.

I SHALL offer for your consideration, this evening, some observations on the subject of broncho-pneumonia. I venture to do this for the reason that I believe that this particular lesion suffers from the effects of tradition, from having been called catarrhal pneumonia, and from its relations to pulmonary phthisis. It is also doubtful whether the profession appreciate what a common lesion it is.

I do not mean that the real lesions and symptoms of the disease have not been described. They have been described by different observers; but their descriptions have been, for the most part, fragmentary, and have failed to give a picture of the disease.

The current notions concerning the disease have remained somewhat obscure and indefinite. The prevailing ideas concerning broncho-pneumonia may be stated as follows:

That the terms broncho-pneumonia, lobular pneumonia, catarrhal pneumonia, and capillary bronchitis may all be used to designate the same lesion; although it is customary to use the words broncho-pneumonia and lobular pneumonia when the disease occurs in children, capillary bronchitis when it occurs in adults, and catarrhal pneumonia when it is believed to be a form of phthisis.

That the inflammation begins in the bronchi, extends to the small and capillary tubes, and then to the groups of air-vesicles which belong to these bronchi, and that for this reason the hepatization assumes a lobular form.

That obstruction of the bronchi with inflammatory products frequently produces areas of atelectasis.

That the catarrh may become chronic, the products of inflammation in the air-vesicles undergo cheesy degeneration, interstitial changes be developed in the framework of the lung, and so a form of pulmonary phthisis be produced.

This, I think, is a fair enough example of the ordinary accounts of broncho-pneumonia,—accounts which fail to bring out the essential features of the disease.

Let us, then, turn to the conditions themselves,—to the clinical symptoms and the lesions of broncho-pneumonia, as we all can see them for ourselves.

To approach the subject properly, we must consider the symptoms and lesions of acute bronchitis, as well as those of broncho-pneumonia.

First, then, of *acute catarrhal bronchitis.* This is a disease of very common occurrence, especially in children, but one which seldom proves fatal. Our knowledge of its lesions is derived from exceptionally severe cases, from cases which are complicated by other diseases, and from the symptoms which we observe during life.

The inflammation involves regularly the trachea and the larger bronchi; less frequently the smaller bronchi also. As a rule, the bronchi in both lungs are equally affected.

The first change seems to consist in a congestion and swelling of the mucous membrane of the bronchi, with an arrest of the functions of their mucous glands. This is attended with pain over the chest,

a feeling of oppression, rapid or asthmatic breathing, and a dry cough.

Fever and prostration are present in a degree corresponding to the extent and severity of the inflammation, and to the age of the patient.

After this the mucous glands resume their functions with increased activity, the congestion and swelling diminish, there is a more rapid desquamation of the superficial epithelial cells, an increased growth of the deeper epithelial cells, and a moderate emigration of white blood-cells. Sometimes the red blood-cells also escape from the vessels.

The patient now has less pain and oppression, the cough is accompanied with an expectoration of mucus mixed with epithelium, pus, and sometimes blood. After death, the only lesions visible are the increased quantity of mucus, the growth of new epithelium, a few pus-cells infiltrating the stroma of the mucous membrane, and sometimes a general congestion. If the smaller bronchi are involved, they contain pus-cells.

In a moderate number of cases, especially in very young children, certain accessory lesions are added. There may be a general congestion of the parenchyma of the lung, and even a filling of some of the air-vesicles with inflammatory products. Still further, the filling of the small bronchi may lead to the collapse of the groups of air-vesicles to which they lead, and thus are produced areas of atelectasis, which may be further changed by inflammatory processes.

In acute catarrhal bronchitis, then, the inflammation involves regularly only the mucous membrane of the bronchi; and in this mucous membrane the only changes are congestion, swelling, changes in the epithelial cells, and in the functions of the mucous glands.

As complicating conditions, we may find atelectasis, congestion of the parenchyma, and areas of diffuse pneumonia.

Now let us consider the lesions and symptoms of broncho-pneumonia.

This disease is of common occurrence in children as an idiopathic inflammation, and as a complication of measles, whooping-cough, scarlet fever, and diphtheria. In adults it occurs less frequently; but in them, also, it may be idiopathic, may complicate the infectious diseases, and may follow injuries of the brain and spinal cord. Constitutional syphilis, also, may give rise to broncho-pneumonia, and in pulmonary phthisis this same inflammation constitutes an important part of the lesions.

In children, while the inflammation always presents the same essential characters, yet there is considerable diversity, both in the symptoms and in the lesions, in different cases. Thus, in infants a few weeks old, often the only symptoms are rapid breathing, a febrile movement, prostration, and death.

In older children there are well-marked constitutional disturbances,—fever, prostration, and cerebral symptoms, in some cases the cerebral symptoms being excessively developed. The breathing is rapid. There may be cough. The physical signs are those of bronchitis alone, or of bronchitis with consolidation of the lung. If there is consolidation, it is developed slowly and disappears slowly. Not infrequently successive portions of the lung become consolidated. The disease terminates in the death of the patient, in recovery, or it assumes a chronic character. This disposition of the broncho-pneumonia to become chronic is one of its characteristic features, a feature in which it differs from acute bronchitis and lobar pneumonia. The cases vary, however, as to the degree in which the disposition is carried out.

In some children, the disease, after running its regular course of one or two weeks, subsides: the constitutional symptoms are less marked; the child seems better in every way. But yet the physical signs of consolidation continue; there is still a slight rise of temperature, and convalescence does not fairly begin. In this condition the child may remain for a number of weeks, and then get entirely well, except that the percussion-note and the breathing remain somewhat changed.

In many such cases as these the recovery is permanent, and the child has no further trouble. But in other cases, after the lapse of several months, the child is attacked with acute general tuberculosis. Thus, it is not uncommon, in children's asylums, for an epidemic of measles complicated with broncho-pneumonia to be followed, after the lapse of a year, by an epidemic of acute tuberculosis.

In other children the course of the disease is more protracted. The physical

signs of consolidation continue; there is a febrile movement; the child has no appetite, it gradually emaciates, and dies at the end of several months. These cases resemble pulmonary phthisis in their symptoms, but they are really only examples of a broncho-pneumonia which has become chronic.

In still other children the physical signs and the constitutional disturbances continue, but the child does not succumb to the disease. It continues to live with the evidences of a chronic bronchitis, which go on year after year. So the child may grow up to adult life, sometimes better, sometimes worse, never entirely well. Cough, expectoration, dyspnœa, occasional fever, harass the patient at intervals. The lung becomes more and more solid, the bronchi more dilated, the pleura thicker, and the affected side of the chest more retracted.

In the cases of acute broncho-pneumonia which die within from two days to three weeks there is some variety in *the post-mortem appearances.*

The lungs may be large and well aërated, but on section the cut ends of the medium-sized and smaller bronchi are unusually prominent and thick, and around them are little zones of hepatization of red, or gray, or white color. This appearance of the lung may be further modified by a cylindrical dilatation of the thickened bronchi.

In other cases the lungs are denser and more congested, and a larger or smaller portion of them is consolidated. The consolidation portions are unaërated, dense, and smooth, of red color, or pinkish-gray, or dark red. Or the color may be mottled,—small, rounded gray or whitish areas surrounded by red hepatization.

The distribution and extent of the consolidation also vary. The hepatized areas may be small, encircle the bronchi, and situated at some distance from each other. Or they may, in some one lobe or part of a lobe, be close together, and between them is a more diffuse hepatization, so that this part of the lung may be completely solid.

The appearance of the consolidated lung may be further changed by a cylindrical dilatation of the bronchi.

In still other cases the consolidated portions of lung are of some size and of somewhat regular shape, as if they were portions of lung corresponding to bronchi. These portions are dense, unaërated, of dark-red color, and somewhat shrunken.

If the inflammation has become chronic, then over one lobe or part of a lobe the pleura is thickened, bands of fibrous tissue run into the substance of the lung, and the lung-tissue is dense, hard, and unaërated.

When we examine these lungs more minutely, we notice first some peculiarities which belong to them because they are the lungs of children and not of adults. The bronchi and the connective-tissue framework of the lungs occupy a larger relative space than they do in the lungs of adults, and in any inflammation of the lungs they are apt to take a more prominent share. The air-vesicles are small, and products of inflammation which have been formed within them are absorbed slowly and with difficulty. The walls of the vesicles are lined with a nearly continuous layer of epithelial cells. When the vesicles are inflamed, there is a greater production of new epithelium and a less of fibrin than in adult lungs. The small size of the air-vesicles renders a simple congestion and dilatation of the capillary vessels within their walls a more serious condition than it is in adults. The bronchial glands are more regularly and intensely inflamed. These peculiarities of the child's lung seem to account for its liability to certain forms of inflammation.

The same exciting causes apparently produce in a child under five years of age broncho-pneumonia; in a person between the age of five and fifteen, broncho-pneumonia, or lobar pneumonia; in an adult, lobar pneumonia.

Now let us consider more in detail the lesions of broncho-pneumonia in children.

The trachea and large bronchi are congested and coated with mucus, as in acute bronchitis; but in the smaller, and to a less extent in the capillary, bronchi, the changes are of a different character. In these small bronchi the entire thickness of their walls is infiltrated with cells,—partly new connective-tissue cells, partly pus cells. This change may affect the small bronchi equally in all parts of the lungs, or it may be confined to those situated in one lobe or part of a lobe.

Around every bronchus, of which the walls are infiltrated with cells in this way, is a zone, either of intense congestion or

of pneumonia, the inflammation extending directly outwards from the bronchus to the surrounding vesicles.

In the zones of peri-bronchitic pneumonia, the walls of the air-vesicles are infiltrated with cells in the same way as are those of the bronchi. The cavities of the vesicles are filled with pus and epithelium, or with an organized tissue composed of a basement-substance and cells.

These constitute the essential features of the lesion,—a bronchitis which involves the *walls* of the bronchi, and a pneumonia which involves the vesicles *surrounding* the bronchi, and which produces changes in the *walls* of the vesicles as well as in their cavities, while the inflammatory products within the cavities of the vesicles are not only pus and fibrin, but also organized tissue.

To these essential lesions are often added other accessory changes. The bronchi, of which the walls are infiltrated with cells, may be dilated. Between the zones of peri-bronchitic pneumonia the lung is congested, and there may be areas of diffuse red hepatization, which do not, however, correspond to bronchi. There is often a layer of fibrin on the pulmonary pleura. There may be areas of atelectasis corresponding to obstructed bronchi.

The bronchial glands are swollen, and the seat either of simple or of tubercular inflammation.

When the broncho-pneumonia passes into the chronic condition, the inflammation usually persists only in part of a lobe, or a single lobe, while the rest of the lungs return to a normal condition. In that portion of the lung in which the inflammation persists we find the small bronchi with their thickened walls and their zones of peri-bronchitic pneumonia. The number of bronchi involved may be moderate, and then a section of the lung will look as if it were studded with fibrous nodules. Or most of the bronchi may be involved, the zones of peri-bronchitic pneumonia are close together, and the entire lung-tissue is dense and solid. In either case the bronchi may be dilated and the pulmonary pleura thickened. As the inflammation goes on, its interstitial character becomes more and more marked, until the affected portion of lung becomes converted into a mass of fibrous tissue, in which the bronchi still remain, while the air-vesicles are obliterated. The blood-vessels, however, are for the most part not obliterated, so that the lung does not become necrotic or degenerated. Still, occasionally, areas of cheesy degeneration exist.

These are the characteristic features, then, of the broncho-pneumonia of children.

In adults, broncho-pneumonia occurs in one of four forms: as an idiopathic inflammation of acute and severe type; as a subacute inflammation; as a complication of the infectious diseases and of lesions of the brain and spinal cord; as one of the lesions of phthisis.

1. The acute, idiopathic broncho-pneumonia of adults.

The invasion of this disease is acute and severe.

The patients have rigors, pains in the head, back, and chest, vomiting, and marked prostration. The temperature runs between 102 and 105; the pulse is rapid; the breathing is rapid and unsatisfactory. There is cough, at first dry, later accompanied by profuse muco-purulent and bloody expectoration. There is venous congestion of the skin, albumen in the urine, and cerebral symptoms. When we examine the chest, we find the percussion-note normal, or exaggerated, or dull. There are crepitant, sub-crepitant, and coarse râles, with sibilant and sonorous breathing.

The cases usually terminate fatally in about seven days. After death we find both lungs large, heavy, and congested. There is fibrin on the pulmonary pleura. The trachea and large bronchi are congested and coated with mucus. The smaller bronchi contain pus, their walls are thickened and infiltrated with cells, and around them are zones of air-vesicles, with their blood-vessels gorged with blood, and in their cavities epithelium, pus, and fibrin.

2. *The subacute broncho-pneumonia of adults.*—This is a rare disease; it has a clinical history much resembling that of acute phthisis.

The patients are attacked with prostration, fever, cough and muco-purulent expectoration, dyspnœa, pain in the chest, coarse râles all over the chest, with dulness over the consolidated portion of the lung. These symptoms continue, the patients lose flesh and strength, and die at the end of several weeks.

After death we find fibrin on the pulmonary pleura. The larger bronchi are congested and coated with mucus. There is an irregular, diffuse, red hepatization, mottled with small white nodules, from the size of a pin's head to that of a pea. In the diffuse red hepatization the air-vesicles are filled with pus, epithelium, and fibrin. The white nodules correspond to sections of bronchi with zones of peri-bronchitic pneumonia. These bronchi are of small size, they contain pus, their walls are thickened and infiltrated with cells, and they may be dilated.

In the peri-bronchitic zones of pneumonia the walls of the vesicles are thickened and infiltrated with cells, but the blood-vessels remain pervious and can be injected. The cavities of the vesicles are filled not with pus and fibrin alone, but also with a basement-substance of homogeneous or finely-fibrillated character, in which are embedded polygonal, round, and fusiform cells.

3. *The complicating broncho-pneumonia of adults.*—It is not uncommon for some of the infectious diseases and some of the lesions of the brain and spinal cord to be accompanied by the development of this form of inflammation of the lung.

In typhoid fever we sometimes find a broncho-pneumonia exactly resembling the same lesion as it ordinarily occurs in children.

In pyæmia the inflammation is of the same kind, but is apt to be less extensive, involving only part of one or both lungs.

With lesions of the brain and spinal cord the changes are the same as with pyæmia.

4. *With phthisis*, both acute and chronic, broncho-pneumonia often forms an important part of the morbid changes in the lungs, but yet it is never the primary or the only lesion. It is only one of a number of pathological changes which go to make up the complex whole of pulmonary phthisis.

From what has been said, then, I would draw the following conclusions:

There is a form of inflammation of the lung which may properly be called broncho-pneumonia.

In children it is the most frequent form of pneumonia, in adults it is less common.

It differs from bronchitis and from lobar pneumonia in that the inflammation effects changes in the *walls* of the bronchi and of the air-vesicles, and this peculiar interstitial character of the process exists from the very outset.

The inflammation extends from the bronchi not to the group of air-vesicles into which they lead, but directly outwards to the vesicles which surround the inflamed bronchi, and in these vesicles the walls are changed.

The interstitial character of the inflammation is its most important feature. It accounts for the severity of the symptoms, the frequent long continuance of the consolidation, the dilatation of the bronchi, and for the tendency of the broncho-pneumonia to assume a chronic character.

The complicating tubercular inflammation of the bronchial glands may give rise later to general tuberculosis.

Broncho-pneumonia is not a form of phthisis; it is doubtful if it is ever directly followed by phthisis; but it constitutes a part, and often an important one, of the lesions which constitute phthisis.

I have endeavored to describe in a somewhat incomplete way the characteristic symptoms and lesions of an ordinary disease. I am well aware that I have described conditions which are familiar, and that nothing which I have said has not been said before.

But the very common occurrence of this form of inflammation of the lung renders it all the more important. The varying character of the lesions has confused their essential and their accidental characters, and I think it is worthy of consideration whether the views which I have advanced concerning the pathology of the disease are not the true ones,—namely, that the inflammation is essentially and from the outset an interstitial one, more or less complicated by other conditions.

A NOTE ON KAIRIN.

BY JAMES H. HUTCHINSON, M.D.,

One of the Attending Physicians to the Pennsylvania Hospital.

ALTHOUGH more than a year has elapsed since Filehne called the attention of the profession to the remarkable antipyretic properties of kairin, and although his observations have been fully confirmed by many physicians in Germany, the drug seems to have been resorted to but rarely in this country. In-

deed, I am not aware that previous to my own experiments any trials of its efficacy in the treatment of hyperpyrexia had been made in this city. Kairin was originally made known to us through the experiments of Fischer and Königs, and is one of a series of artificial alkaloids derived from chinolin by the addition of oxygen, hydrogen, and carbonic acid. It occurs in a yellowish-white crystalline powder, of a somewhat pungent bitter taste, which is excessively disagreeable to most patients. Given in doses of from one to one and a half grammes to healthy adults, it has no physiological action and no effect upon the temperature. It also does not produce any unpleasant effects, such as headache, ringing in the ears, or sickness. When, on the other hand, it is administered in hourly doses of half a gramme, in febrile conditions, with the temperature ranging between 103° and 105° F., the temperature is usually reduced in two hours from three to five degrees, and not infrequently falls to normal. The defervescence is generally accompanied by profuse perspiration, which usually continues until the temperature ceases to fall, by shivering, and by a greenish discoloration of the urine. If administered in larger doses (from a gramme and a half to three grammes and a half), it often produces grave symptoms, such as cyanosis, apathy, and subnormal temperature, which necessitate the prompt use of stimulants. Occasionally collapse is produced by it, resembling, it is said by Drs. Freymuth and Polchen, that of cholera Asiatica, but differing from the latter in the sense of vigor felt by the patient, who invariably recovers. Filehne says the temperature is often reduced to 94.6° F. by doses as small as the eighth of a gramme in patients of a slender build or who are emaciated or suffering from hectic fever.

Guttmann has given kairin in cases of pneumonia, measles, phthisis, typhoid fever, scarlatina, pleurisy, peritonitis, erysipelas, ague, septicæmia, and apparently always with advantage. On the other hand, Dr. H. Menche's (of Rheydt) experience with it in the pyrexial stages of pneumonia, pleurisy, and pernicious anæmia was unfavorable, which has been attributed by others to the use of large doses. In rheumatism, he found that its use was followed by diminution of the pain, but not by any reduction in the swelling of the joints. Freymuth and Polchen have prescribed it in relapsing fever, with the following results: When given from the fourteenth day after the first attack of relapsing fever, the second attack occurred as usual, but in a very modified form, with a rigor but no elevation of temperature, and with spirilla in such small numbers that the nature of the attack was barely recognizable. This continued for twenty-five hours, when the kairin was omitted. Two hours afterwards a classical relapse occurred, with a temperature of 104.9° F., and spirilla in abundance.

The first case in which I was induced to try kairin was one of typhoid fever of more than ordinary severity.

The patient, a robust young Irishman, was admitted to the Pennsylvania Hospital in the second week of the disease, and was treated in the usual way for the first week. On the ninth day after his admission, observing that there was little, if any, morning remission, and that the temperature was 103° F., I determined to make trial of the new drug. A dose of eight grains was accordingly given at 1 P.M. on May 5. An hour later, no effect having been produced, a second dose of the same amount was administered. At 3 P.M. the temperature was found to have been reduced to 101° F. At 5 P.M., as the thermometer showed that the temperature had risen again to 103°, a third dose of a like amount was prescribed, with the result of a fall of temperature within an hour to 101⅖° F. At 8 P.M. the temperature had again risen to 103°, and a fourth dose was accordingly administered, and the temperature again reduced one and a half degrees. The exhibition of the drug was followed by depression, by profuse sweating, and, after the last dose, by some muscular tremor. The depression of temperature was temporary, lasting only about an hour. Kairin was not administered again until the fourteenth day after admission, when it reduced the temperature in an hour from 102.5° to 100°. In the mean time, the fever had ceased to be continuous, the morning remissions being as marked as they usually are in the third week of typhoid fever.

In one other case of typhoid fever I gave kairin with as marked results as those just detailed, and it also reduced the temperature very considerably in a case of

malarial fever; but in this latter case I did not like to push it as in the other cases, on account of the extreme debility of the patient.

By the kindness of Dr. J. Howard Reeves, lately resident physician to the Pennsylvania Hospital, I am permitted to refer to a case of sunstroke to which he gave kairin. The patient, who had a temperature of 105°, was conscious, but almost delirious with pain in his head. A cold bath was given to him immediately after his admission to the Pennsylvania Hospital, which reduced the temperature a few degrees. It rose again soon after, and the skin became as dry and burning as before. Eight grains of kairin were then given to him. In an hour his temperature had fallen two degrees, and he was covered with a profuse perspiration. The temperature after this steadily fell, and in three hours had reached the normal.

Observing that profuse perspiration was one of the consequences of its administration in the above cases, it occurred to me that kairin might possess valuable properties as a diaphoretic. With this end in view, I gave it in eight-grain doses to a patient with general anasarca dependent upon disease of the kidney. No sweating followed its use,—a result which was probably due to the fact that the patient was free from fever. It will be remembered that in my opening remarks it is expressly stated that no sweating is produced by its administration in health.

The cases which I have just reported have convinced me that kairin possesses the power of reducing the temperature of the body in fever to an unusual degree, and that it does this with certainty and promptitude, and, it may be added, when moderate doses are used, with safety. One care, however, it is necessary to exercise in its administration, and that is to use fresh specimens of the drug only, as it undergoes change if kept for any length of time. It reduces the temperature much more rapidly than quinia, although the apyrexia produced by it is of much shorter duration than that caused by the latter. It is also capable of depressing the temperature during the evening exacerbations of fever, while the most marked results are obtained, on the other hand, from quinia just before the morning's remission. Its use is also free from some of the objections usually urged against the latter, as it does not give rise to unpleasant effects, such as headache, ringing in the ears, and the like. Although less rapid in its action than the cold bath, it is obvious that it may be administered in many cases in which a resort to the latter would be impossible. The excitement and terror which are often occasioned by the use of the bath, even when it is brought to the bedside of the patient, constitute a positive objection to it, which, to my mind, becomes insuperable in cases in which it is necessary to carry him some distance to a bath-room. It is said to exert a marked and favorable influence over the brain-symptoms which occur in fevers, possessing, in this respect, an undeniable advantage over several of the other antipyretics.

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REPORT ON MEDICAL AND SURGICAL ELECTRICITY.

BY WM. R. D. BLACKWOOD, M.D.

GALVANISM.

DR. MAX BUCH has called attention to the fact that galvanic irritation of a living muscle always produces an increase of temperature, and has, in this connection, proposed to apply electricity to determine the truth in cases where death is not certain. Although muscular contraction can be produced for a short time after death in certain portions of the body (the deltoid, or quadriceps femoris), no elevation of the temperature occurs after five hours, and he therefore proposes the conjoined application of a delicate surface-thermometer, with the current from, say, five cells. When the mercury has remained stationary for some minutes after applying the thermometer the current is turned on, and at once the column rises in the tube if the muscle is alive, but if death has occurred the temperature remains unaltered. The method may, at rare times, be of value, but other very good indications of death are within reach of practitioners of ordinary skill.

Gibney reiterates, in the *New York Medical Record*, the advantage of the *strong* galvanic current in obstinate sciatica. He applies the positive pole over the nerve at its point of exit at the sacro-sciatic notch, and the negative is placed just above the popliteal space, or, preferably, over the area of greatest pain. The

current is run up to its maximum bearable force and kept there. Referred sensations (paræsthesia) will now be felt throughout the distribution of the nerve. The pain is never so bad from the current as from the neuralgia, and relief is usual from the first. Great care must be observed in precision of application. Cases are given in illustration, and we know, from experience, the value of Dr. Gibney's method; and our own observation agrees with his in several obstinate cases, where every other method of treatment failed.

The galvano-cautery has been lauded by Frolich, of Berlin, in follicular catarrh and trachoma. The reaction is stated to be slight, even when extensive granulations have thus been destroyed.

The cautery has also been quite successfully employed in lupus by Bernier (*Paris Médical*), and Shoemaker, of our own city. One great advantage over jequirity and ordinary caustics is the almost entire absence of acute pain, and another is the decreased probability of auto-inoculation. The incisions usually made by the bistoury have, without doubt, been the means of extending the disease, when carelessly made. It is asserted that the latter procedure has, before now, been the cause of lighting up internal tuberculosis, true lupus being, according to Cornil, a tuberculous disorder of the skin. This theory has received support from good authority at late medical conventions, and if the cautery can compete with older methods of destroying the local affection, which is reasonably certain, the advance in therapeutics is an important one.

The troublesome senile hypertrophy of the prostate is, according to Bredert (*Berlin. Klin. Woch.*), rapidly reduced by electrolysis, the cathode being applied to the gland by insulated needles. Five cases are reported as thus cured, but the account given does not state whether the reaction developed any inflammatory sequelæ. In our own cases, where the ordinary current has been applied *without puncture*, we have repeatedly had to combat considerable irritation of the bladder, though, curiously enough, galvanism has, at times, relieved cystitis promptly which arose from other causes.

GALVANO-PUNCTURE IN ANEURISM OF THE AORTA.

Dr. Francesco Brancaccio reports the case of a man, intemperate, 64, who, on examination, showed a tumor limited above by the upper border of the second rib, on the right by the sternum, on the left by the mammary line, and which was continuous below with the heart. The diagnosis was aneurism of the ascending aorta, and galvano-puncture was practised. Two needles were inserted in the third interspace to a depth of one inch and a fifth, and one inch and a half apart. Fifteen Daniell cells were used (seventeen volts). The first sitting lasted sixteen minutes. The patient was better the same afternoon; the pulse fell from 118 to 90, was stronger, and the tremor was smaller; the respiration was freer and less frequent. Twenty cells were used for fourteen minutes twenty days afterwards, and four applications made the cure complete.

Hydrarthrosis of the knee has been repeatedly relieved by galvanism, and a case is reported by Dr. Castaneo, of Buenos Ayres (*Revue Médicale*), in which a cure was promptly effected after blisters, cautery, and other radical measures failed. Many instances are now on record evidencing the rapid absorption of pleuritic effusions under galvanism, and others of abdominal character (not encysted); hence the success might logically be looked for in any joint-effusion where the integrity of the articulation had not been destroyed.

Silva-Aranjo and Moncorvo communicated their first note on the treatment of elephantiasis by electricity to the Academy of Sciences of Paris in 1880, and to the Academy of Medicine in 1881. More than a century ago Henley treated a case successfully (*Alard, De l' Inflammation des Vaisseaux Absorbans (sic) Lymphatiques, Dermoides et Souscutanés*, Paris, 1824, p. 589). When Silva-Aranjo first applied electricity to elephantiasis of the scrotum, in 1879, he neither knew of this case nor of those of Beard and Rockwell (Tibbits's "Hand-Book of Medical and Surgical Electricity," London, 1877). The authors employ from forty to sixty Trouvé elements, the negative to different affected points, and the positive on the sound skin near by. They sometimes use faradic currents in conjunction, but their reasons for doing so are not apparent. The duration of each application is from fifteen to thirty minutes, and in severe cases electro-puncture with needles is resorted to.

Trials have also been successful in the service of Professor Oliveira Ferjaô, of Lisbon, and are in progress at Vienna, in the division of Professor Kaposi, by Riehl. Their conclusion is that, if not infallible, electricity is certainly the best agent in our hands at present for treatment of this formidable disease. We have no account of the treatment by electricity in this country aside from those already noted, but the frequency of the disease would certainly afford wider experiment than has heretofore been reported.

FARADISM.

The induced current has been used in pleural effusions of varied kind and degree, as reported by a number of Continental authors, and their results agree with our own, so far as hastened absorption of serum was concerned in later stages of acute pleurisy.

In obtaining condensation of the uterus where involution has not progressed satisfactorily after labor, the faradic current is highly recommended by several reporters. Some ten years ago we gave the detailed history of a number of cases of subinvolution treated entirely by electricity, and we are glad now to notice, at last, one of our critics as having been converted after his plainly-expressed disbelief. We have had excellent results always in such cases, and also in hypertrophy of the organ from many other causes, notably from submucous fibroids. Recently a lady who declined surgical measures has parted with her fibroids (two in number) under careful faradization, and this without taking ergot or any other drug.

The ordinary faradic coil as usually wound with a single secondary of a uniform gauge of very fine wire will not answer for treatment of deep-seated visceral organs. An arrangement of multiplex coils of varying specific resistance wire and different area in cross-section of both wire and spool is necessary, as described in another place.* The number of binding-posts in ordinary faradic batteries is no criterion of their value, the secondary being merely looped out at points and connected to these posts. Intensity in such cases is just as well governed by the draw-tube, and accidents from short circuiting in poorly-covered wire are liable in this plan of construction.

Obstinate hiccough is reported as cured by faradism, but the current has failed in our hands, although faithfully tried, in a hospital case, which gave way at last to monobromide of camphor, cannabis Indica, and sumbul.

In psoriasis, acne, and prurigo, faradic currents have been reported, within the past three months, as successful in many cases, some of them inveterate in their severity.

STATIC ELECTRICITY.

In the *Progrès Médical* we find, incident to the phenomena of static electricity, the case of a young woman suffering from ovarian hyperæsthesia and hysteria, who possesses increased bodily electricity. Brushing her hair produces crepitation and sparks, light substances cling to her finger-ends, and dry clothing wraps her limbs so tightly as to impede voluntary movements. The intensity of the phenomenon coincides with her feelings: when highly charged she is well and sprightly; when not, she is dull and depressed. Damp weather disagrees with her, as it does with the static machine, and after repeated discharges she feels exhausted. These phenomena cannot be averted by the wearing of silk underclothing, as might be expected, but the application of the "electric wind" is at once efficacious in restoring her spirits, no matter how much depressed she may at the time be. Our plan of applying the "wind" or "bath" is to insulate the patient, connect the stool with the *outside* of one jar by chain, and then, through a ball rheophore connected with the *outside* of the other condenser, make a thorough "general" application. The jars must be disconnected, and the "brush" made as long as possible, to obtain the peculiar refreshing effect.

Vigoroux contributes to the same journal an article on the prevention of cholera by the use of static electricity. He refers to experiments of Boillot, Angus Smith, and Chapuis, which prove the great disinfecting power of ozone, as produced by the static machine, and the stimulus to nutrition by the electric bath (insulation on platform). He believes that daily baths are the best prophylactics against cholera; but the unreliability of the machines, as generally made, militates against their use

* "The Causes and Treatment of Constipation," Philadelphia Medical Times, July 28, 1883, and Proceedings of the Philadelphia County Medical Society, vol. v. p. 173.

extensively, even if the theory were correct,—which we doubt.

The Toepler-Holtz of James W. Queen & Co., of this city, is the only static-electric machine in our experience which is *uniformly* reliable in all weathers, but it requires care to keep it so in humid summer months if not encased in an air-tight cover. Properly covered and kept *free from dust*, it will work satisfactorily at any time.

EXPERT AND NON-EXPERT EVIDENCE.

BY HENRY A. RILEY, ESQ.,

New York City.

ONE of the most vexed questions in medico-legal matters is the proper weight to be given to expert evidence, and in what respects it is better than non-expert evidence. A short time since there were several articles in one of the leading reviews on this subject, and one or two of the writers took the ground that, on the whole, expert medical evidence was unreliable. This is not the general view, however; and, with proper restrictions, there is no doubt that expert evidence is of as much value as any that can be produced in the trial of a case. There is a great deal of doubt whether the production of expert witnesses by one side or the other to sustain its own case is not a vicious privilege, and the cause of much of the dissatisfaction felt by the public with the whole system. It certainly does not add to the popular respect to see several distinguished physicians testify on a trial that a person is insane, and then to see them followed by several other equally distinguished physicians, who testify to exactly the opposite.

The only remedy, apparently, for this state of affairs is to have the experts called by the court, instead of by a particular side to bolster up its own case. In this way the physician is really independent, and is not rendered partial by the knowledge that his compensation depends upon his taking the view certain lawyers desire.

The courts will, however, admit non-expert testimony, under certain conditions, in cases where it is generally supposed that only professional persons can give reliable opinions. Even in cases where the insanity of a person is in question, such non-expert testimony may be produced. The proper limits of such testimony were settled in a recent case in the United States Supreme Court, where Justice Harlan gave the following interesting opinion: "Counsel for the plaintiff in error contends that witnesses who are not experts in medical science may not, under any circumstances, express their judgment as to the sane or insane state of a person's mind. This position, it must be conceded, finds support in some adjudged cases, as well as in some elementary treatises on evidence. But in our opinion it cannot be sustained, consistently with the weight of authority, nor without closing an important avenue of truth in many, if not every, case, civil and criminal, which involves the question of insanity. Whether an individual is insane, is not always best solved by abstruse metaphysical speculations, expressed in the technical language of medical science. The common sense, and, we may add, the natural instincts, of mankind, reject the supposition that only experts can approximate certainty upon such a subject. There are matters of which all men have more or less knowledge, according to their mental capacity and habits of observation,—matters about which they may and do form opinions sufficiently satisfactory to constitute the basis of action. While the mere opinion of a non-professional witness, predicated upon facts detailed by others, is incompetent as evidence upon an issue of insanity, his judgment based upon personal knowledge of the circumstances involved in such an inquiry certainly is of value, because the natural and ordinary operations of the human intellect, and the appearance and conduct of insane persons, as contrasted with the appearance and conduct of persons of sound mind, are more or less understood and recognized by every one of ordinary intelligence who comes in contact with his species. The extent to which such opinions should influence or control the judgment of the court or jury must depend upon the intelligence of the witness, as manifested by his examination, and upon his opportunities to ascertain all the circumstances that should properly affect any conclusion reached. It will also depend in part upon the degree of the mental unsoundness of the person whose condition is the subject of inquiry; for his derangement may be so total and palpable that but slight observation is

necessary to enable persons of ordinary understanding to form a reasonably accurate judgment as to his sanity or insanity. In other cases the symptoms may be of such an occult character as to require the closest scrutiny and the highest skill to detect the existence of insanity."

TRANSLATIONS.

Successful Extirpation of the Spleen.—At a recent meeting of the Society of Physicians in Vienna, Dr. V. Hecker, assistant to Professor Billroth, reported the following case. A woman, æt. 43, had, ten years previously, begun to experience pain in the left side of the abdominal region. After a lapse of three years a tumor appeared, which within the last two years had grown rapidly. The increase had been more rapid a few weeks before than at the time of the operation. It had recently become movable. In the dorsal position there was a decided projection, and a tumor the size of a child's head was felt. This tumor could be pushed to the left and turned on its axis. Its inferior and superior borders presented sharp angles. Intestinal accumulations were caused by the tumor. The liver was small. The operation showed the tumor to be a lymphosarcoma which had grown from the spleen. The connections with the mesentery and intestine were separated partly by tearing, partly with the knife, numerous ligatures being required. On account of adhesions with the pancreas, it was necessary to leave a part behind. The course of the case had been thus far favorable, and it is hoped a cure will follow.

So far, there are known to have been thirty-six cases of extirpation of the spleen: of these, twenty-one on account of leukæmia. Of the last, but one recovered.—*Wiener Med. Wochenschrift.* x.

Concerning the Behavior of Varicosities of the Pregnant after the Death of the Fœtus.—Dr. Gustave Rivet reports this case in the *Progrès Médical*, xi.: A cook, æt. 33, of good constitution, had already gone through two pregnancies, the last being an abortion at the fifth month. She complained during both her first and second pregnancies of great varicosity of the lower extremities. In the third pregnancy it again appeared during the first months. It was well developed; hard, compact cords were seen situated in the region of the ankle-joints, also on the inner surface of the left thigh. These were associated with œdema and a decided tenderness. The movements of the child suddenly ceased, the breasts became painful, and yielded some milk-drops upon pressure; the circumference of the abdomen decreased, and from that moment the varicosities began to lose in fulness and size. A few weeks later the patient gave birth to a female child, very much macerated.

The interesting facts in this case are, on the one hand, the relatively long time in which the dead fœtus remained in utero; on the other, that from the moment the death of the fœtus was known to have occurred, the varicosities began rapidly to disappear. Hence the decision is arrived at that the uterine circulation stands in a close connection with the venous, and, when it is diminished, the stasis in the veins below is reduced. x.

Inhalations in Phthisis.—From experiments with inhalations in phthisis, Dr. Renzi (*Rivista clinica e therapeutica*, August, 1884) gives the following general conclusions:

1. Inhalations of iodine and of iodoform with spirits of turpentine (one part to twenty-five, of which a few drops are placed upon a respirator) ameliorate the general nutrition, augment the inspiratory and expiratory pressure, and produce an improvement in the state of the lungs. But the fever, the diarrhœa, and the night-sweats are not modified. The cough and expectoration are especially modified by the iodoform and turpentine.

2. Inhalations of sulphuretted hydrogen and of sulphurous acid resemble each other in their effects: they increase the general strength, improve nutrition, and increase the urinary secretion. Inhalations of sulphuretted hydrogen have a special action upon respiration,—diminution of the number of respiratory movements, which become easy, tranquil, and profound,—and also upon the cough, which diminishes and may disappear. The fever, sweats, and diarrhœa are not modified.

3. Until further information is obtained upon the subject, the author considers the terebinthinate inhalations and those of sulphuretted hydrogen as occupying the first rank.—*Bulletin Gén. de Thérapeutique*, October 15.

Concerning a Special Form of Nymphæ and the Influence of the Same upon Labor.—Paul Budin (*Le Progrès Médical*, xii. 18, 347, 1884) states that in some females the labia minora unite by a prolongation posteriorly instead of terminating about the middle of the vulva. There appears then both a commissure of the labia minora and one of the labia majora. The author found this in many white females, and in one colored. In one case he found a moderately deep furrow between the two commissures. Luschka and Sinety had already described similar cases. The results of this condition are either that the child's head, when passing the vulva, is thrown forward and covered with a caul, the head being retarded by the commissure of the nymphæ, or that a rupture occurs. The latter is usually central. This is contrary to the common course of perineal rupture, in the ordinary condition of things it being usually to one side. One or both of the nymphæ may also in this case be torn loose.

The author proceeds to report at length a case of this kind, in a secundipara æt. 22. In this case the midwife, who was supporting the perineum, reported a rupture. The author examined, but found the perineum intact. A little anterior, however, he found lips of tissue of a blue color, which were hanging forward. On closer examination it was found that the left nymphæ had been torn from their insertion at the clitoris and were hanging loose from the vulva. On account of their posterior connection, the nymphæ in this patient formed a complete ring, constituting an obstacle to the advancing head. This, however, was removed through the rupture of the labia minora from their anterior attachment. Injections of a two-per-cent. solution of carbolic acid were made five or six times a day, and no evil sequel occurred. On the seventh day *post partum* the labia minora came away entirely. On the seventeenth day the genitalia were completely healed. x.

A Hair Tumor removed from the Stomach of a Young Girl through Gastrotomy (*Arch. für Klin. Chir.*, xxix. S. 609).—In a girl, æt. 15, who since her thirteenth year had been in a kyphotic condition, often complaining of stomach-trouble, there was discovered an abdominal tumor, solid and movable. It was thought to be a floating kidney, and extirpation was attempted. On opening the abdominal cavity, the tumor was found to be within the stomach, which was very pendent. An incision into this organ showed a hair tumor representing the dimensions of the stomach: weight, 281 grammes; length, 13½ centimetres; breadth, 10½ centimetres; thickness, five-sixths centimetre. The color of the hair was black on the surface, on the inner part decidedly blonde. The pieces were from one to two centimetres long. The patient had a favorable recovery from both her abdominal and gastric wounds. She explained, after her recovery, that four years previously she had for the space of one year chewed her hair energetically. The hair of the inner part of the tumor resembled quite closely her own hair. The author thought that the hair on the outer part had been colored black by preparations of iron which he had given her for chlorosis over a long period of time. This case, he said, is not without parallel. He had collected not less than seven analogous cases from the literature. In the majority of cases the chewing of the hair continued much longer, and the tumors were on this account larger. The other patients having hair tumors all died, either from uncontrollable vomiting or perforation. x.

Sudden Death after Injection of Iodine in a Case of Spina Bifida.—A little girl who had been treated for spina bifida by tapping had the lead compress removed too soon, and the swelling afterwards returned. Dr. Waltering, of Münster, aspirated the tumor, removing two tablespoonfuls of serum, and injected a half-ounce of an iodine solution (iodin. puri, 0.5, potassii iodid., 1.5, aquæ dest., 30) directly into the sac. The child suddenly stopped crying, and stopped breathing also, although the heart for a time continued to beat. The lips were livid, but became slightly better colored under artificial respiration. At the end of thirty minutes the heart had ceased to beat, and efforts at resuscitation were discontinued. The case is reported (*Allg. Med. Central Zeitung*) as a warning against injections of iodine solution into the sac in a case of spina bifida.—*Deutsche Med. Zeitung*, October 16.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 29, 1884.

EDITORIAL.

THE LESIONS OF LOCOMOTOR ATAXIA.

THE restricted view of the pathology of Duchenne's disease which regards it as a malady in which the spinal cord is invariably the site of morbid changes, and that the posterior columns, or, more correctly speaking, the posterior root-zones (columns of Burdach), and the nerve-roots, are chiefly affected, needs to be modified and slightly extended, in the light of some recent observations. Locomotor ataxia and posterior spinal sclerosis can no longer be regarded as convertible terms. A very valuable contribution was brought to the discussion of this question by Charcot (*Leçons sur les Maladies du Système nerveux*) in his classical consideration of some of the anomalies of locomotor ataxia; but quite recently several communications have appeared, which enable us to draw more definite conclusions as to the pathology of this most interesting affection. Dr. Rummo in particular has called attention* to a form in which the motor inco-ordination is entirely missing. In the case reported, the cerebral symptoms were followed, nearly two years afterwards, by neuralgic pains in the lower extremities, while the power of co-ordination of muscular movements remained perfect. Fournier last summer delivered a series of lectures on the Pre-ataxic Period of Tabes, in which he claims that the stage which precedes inco-ordination usually lasts from three to six years, but may be prolonged to thirty. He regards it as a polymorphous affection, of which the *début* may be announced in various ways: by vesical or genital disorders, and often by cerebral symptoms, which he groups under the following heads: (1) vertigo (reflex or essential); (2) various attacks (apoplectic, epileptiform, aphasic); (3) motor disorders; (4) psychic disorders; and (5) general paralysis. Without considering these (which are reviewed more fully in an interesting article, by Scribe, in *La France Médicale*, No. 102), or discussing the cases presented by M. Dejerine last year to the Paris Academy (in which no special lesion existed to account for the symptoms during life, which were found to be due in reality to parenchymatous neuritis of the cutaneous nerves), we will merely state that the conclusion of Messrs. Rummo and Fournier, that "Tabes dorsalis is an affection of the spinal cord, of the brain, and of the peripheral nerves," seems fully warranted by their observations. It would also seem that the term locomotor ataxia should yield to the word "tabes," since the ataxia of movements may be wanting during many years, and even may be entirely absent throughout the whole course of the affection. In a suggestive paper by E. C. Seguin (*Archives of Medicine*, October), some illustrations of this anomalous course of posterior spinal sclerosis are given, and the possibility is intimated of the accidental concurrence of other disorders, such as general paralysis with spinal sclerosis, any dependence between the cerebral and spinal lesion being doubtful. But he also reports a case of the extension of the pre-ataxic stage to the extraordinary period of twenty-nine years, and another in which atrophy of the optic nerve preceded the ataxic symptoms by at least four years.

* Sur un cas non-commun de tabes bulbaire primitif. Medicina Contemporanea, April, 1884, L'Union Médicale, June, and La France Médicale, September, 1884.

WE desire to direct especial attention to the gift to the German Hospital of nearly six hundred thousand dollars by John D. Lankenau, Esq., of this city, some account of which will be found on another page.

AN APPEAL TO CONGRESS.

IF to be forewarned is to be forearmed, we certainly should have nothing to fear from the advent of the cholera, which is billed to appear shortly. Sanitarians, local health boards, and the medical journals, as well as the public press, are for once agreed that the presence of epidemic cholera in this country may be expected within a few months.

The American Public Health Association at its last meeting, and the recent conference of State Boards of Health, gave serious consideration to this subject, and adopted certain valuable recommendations for the prevention of the epidemic, which have been printed in the form of a report and widely circulated. The essential factors to the prevalence of cholera in this country in epidemic form are, first, its importation by ships from infected ports, and especially from India; secondly, local disregard of hygienic principles; and, thirdly, the transportation of the poison by patients in clothing or about their persons in going from place to place while suffering from some stage of the disease. To combat these three factors needs the practical co-operation of international, national, and local health boards.

In view of the threatened introduction of cholera into this country during the coming year and the consequent waste of life and property and derangement of commerce, trade, and productive industries, the conference, besides warning local health boards to increased vigilance, declared that "the general government should maintain such a national health service as shall, by rigid inspection at the port of embarkation, question the freedom from disease and infection of all persons and things from infected districts, and shall secure the surveillance of such persons and things while on shipboard, and, when necessary, detention at quarantine stations on this side for treatment and disinfection." The conference urged upon Congress the establishment of such a service by attaching to the foreign consular service medical officers of health, to be either accredited consuls or attached to the consulates, charged with the execution of the above duty.

It is peculiarly unfortunate that the inspection and quarantine service inaugurated by the National Board of Health is now inoperative for want of appropriation by Congress. It is to be hoped that the members of the next Congress will have their attention so strongly directed to the necessity of prompt action in this matter as to lead them to act upon it early in the session and make the necessary appropriation required to establish an efficient national protective sanitary service.

While local health boards can do very much towards restricting the spread of the disease and reducing its mortality, yet they are almost powerless with regard to preventing its introduction. The National Board of Health must do this work, or it will be left undone.

THE NEW YORK STATE MEDICAL ASSOCIATION.

THE first annual meeting of the New York State Medical Association, which was held at the Murray Hill Hotel, New York, on November 18 and the three following days, demonstrated very conclusively the strength of the revolt from the arbitrary action of the old State Society upon the Code question, three years ago. While many of the members of the new organization might have been in favor of the objects aimed at by the committee in its report, they believed that the step proposed was injudicious and hasty, and calculated to create a division between physicians of New York and those of other portions of the country. That step was taken, and, as had been anticipated, the American Medical Association at St. Paul refused to receive the delegates from the

New York State Society. The establishment of a new State Association and of a second County Medical Society in New York City was almost a natural result of this state of things; and now, looking at the success of the meeting of the new Society, at the value and number of the scientific papers that were read, the well-sustained discussions, and the standing of those who participated, we are almost tempted to rejoice at the division in the profession which stimulated to such activity and brought out such good work. The founders of the new Association deserve to be congratulated upon its success. Owing to pressure of Society reports, we shall not attempt an analysis of the numerous papers read at this session, as we learn that the *New York Medical Journal* has arranged to publish the official report of the proceedings. The list of officers elected for the ensuing year is as follows:

President.—Dr. John P. Gray, of Oneida County.

Vice-Presidents.—Second District, Dr. W. H. Robb, of Montgomery County; Third District, Dr. J. G. Orton, of Broome County; Fourth District, Dr. Joseph O. Greene, of Erie County; Fifth District, Dr. J. C. Hutchinson, of Kings County.

New Members of Council.—First District, Dr. William Gillis, of Franklin County; Second District, Dr. R. C. McEwen, of Saratoga County; Third District, Dr. Frederick Hyde, of Cortland County; Fourth District, Dr. Darwin Colvin, of Wayne County; Fifth District, Dr. J. W. S. Gouley, of New York County.

CARBOLIC ACID IN THE TREATMENT OF INTERMITTENT FEVER.—Dr. Dieulafoy, in a case of obstinate ague which had recurred in spite of large doses of quinine, tried hypodermic injections of phenic acid in one-per-cent. solution, .025 gramme (gr. $\frac{1}{3}$) being given night and morning for two weeks, when the chills were finally arrested. Three days later the injections were discontinued and the patient discharged cured.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THERE has recently occurred a rather lively episode in a side-wing of the medical world here. Since the Radical section of politicians has become a distinct factor in the Liberal ranks, and their voices have been heard in Liberal ministries, the education of the people has been distinctly kept in view. The Chartists were true to themselves in deciding that if every man ought to have a vote in the election of the legislators, it is well to educate him so that he may be fit to use it properly. Consequently, some ten years ago the School Board came into force,—otherwise compulsory education,—the rates being used to furnish the necessary outlay in proper school-rooms, etc. Now, of course, the argument that the brains of our children are the finest raw product of our country, and that England has obtained her position in the world by manufacturing raw products, and therefore the children must be educated, is sound enough. But, unfortunately, there is no such thing as unalloyed good in this imperfect world; and, laudable as this project is in principle, there have been found some drawbacks in the working. The London School Board has taken a decided step in the selection of the elementary books by which the children are to be taught, and the good effects of their judgment are to be seen in the array of school-books now issuing from the press, in every way a marked improvement upon, as well as contrast with, those of a period but little anterior to this movement. Everything is made as easy for the children as possible, but the encouragement given to the teachers to push them through the different standards, by making the additional salary to be won dependent upon the percentage of passes, has told upon the children unfavorably as regards their physical health. It is all very well to push on children who come to school with a full stomach and a well-fed brain, but when the belly is empty the brain flags; consequently, the excessive pressure, especially upon little half-fed town mites, has begun to tell in obvious effects.

Mr. Mundella, the head of the education department, is an advanced Liberal, and was originally a Chartist when young. A dispute arose first between him and Dr. Rabagliati, of Bradford, Yorkshire, who charged the School Board with overworking the children. As the dispute grew warmer, Dr. Crichton Browne, the Lord Chancellor's Visitor in Lunacy, was drawn into it. Perhaps Dr. Crichton Browne's name may not be unfamiliar to the readers of these letters (if such there are), but a few words about him may not be out of place. He first became con-

spicuous as the Medical Superintendent of the West Riding Asylum at Wakefield, where he not only administered the asylum in a manner to elicit the warmest admiration of all, but he started what was practically a school of psychological medicine. He fired his subordinates with his own enthusiasm. Careful clinical observations were followed by close examination of the bodies, as well as the brains, of those patients who died. The West Riding Asylum Reports were the most advanced works bearing upon insanity of their day. All of which testifies that there is a practical side to Dr. Browne's intellectual brilliancy. Such a man was not likely to make a mistake if he knew it; and he was not likely to make any mistake when he was asked to investigate the matter of overpressure in elementary schools, and agreed to do so, albeit the demands upon his time were already very great. He made his observations, and after that his report, which so far substantiated the fact that overpressure did exist that it was not allowed to see daylight without an appendix or rider attached to it from an official of the education department, named Mr. Fitch, explaining away much of it. The two were published together, whereupon a storm began to blow.

Dr. Crichton Browne has an unusually large vocabulary, and writes and speaks with a fluency and flow of language which is very unusual. Consequently, some newspapers talked of his rhetoric, and insinuated that this took the place of facts, or, rather, perhaps, that meagre facts were decked out in ornate language till they looked larger than they actually were,—a very unfair assumption, as Dr. Browne only used his ordinary language. He, of course, was not a man to be shut up or have his mouth closed in any such violent manner, and, in a series of letters in the *Times*, has thoroughly vindicated himself from the charges levelled at him. In this "policy of reprisals" the unfortunate official has been sat upon effectually, and has been taught a lesson which ought to be useful to others. At a recent meeting of the teachers of the Metropolitan Board Schools a motion approving of Dr. Browne's report was carried unanimously.

It is a great pity so much warfare has been occasioned, but it has had the effect of demonstrating that, however admirable education may be, there are limits within which it is well to keep, and that the brains of famished little children are easily overtaxed, and therefore that their tasks must be proportioned to their powers. Especially are home-lessons to be deprecated for poor little waifs that have no privacy for study. The whole controversy will bear fruitful results in time.

Of course the education department were disposed to treat Dr. Crichton Browne in that cavalier manner which has of late been the fashion towards the medical profession; but it made a mistake. If we had a few more men like Dr. Crichton Browne in our ranks it would be a most fortunate thing for the profession in every way. His spirited conduct will, perhaps, inspire others of our profession to kick back when assailed; and, further, such handling of a public department may teach officials to conduct themselves respectfully towards the framers of reports upon disputed matters, especially when these latter are invited to take upon themselves troublesome inquiries, as Dr. Browne was in this case. It would seem that human nature is human nature, and, whether a government consists of the representatives of the "few" or the "many," it has a tendency to be high-handed.

As a perfect contrast to Dr. Browne's ways and theory of life, may be mentioned a small storm in a teapot which blew recently betwixt a well-known member of the profession—more before the public some years ago than at the present time—and a not unknown member of the profession, who, however, does not hold a place in the first rank. The latter, some time ago, wrote a book on a subject upon which the former was a well-known writer some twenty or five-and-twenty years ago. On its appearance the ex-author wrote the author a letter of congratulation upon the work, and expressed a hope that before long some opportunity would be afforded him of teaching his views to students. In his advertisements of his book the author made use of this letter,—perhaps rather sharp practice, as the letter was evidently merely a private one. After the lapse of some time the advertisement was brought under the notice of the writer of the letter, who thereupon sat down and wrote a second letter indignantly protesting that he had never even seen the book. Of course this was a little too much for the author, who, having kept the first letter, sent it on for the writer's inspection. He admitted it was no forgery, but could not throw any light upon the discrepancies betwixt his two letters. Now, this curious letter-writer is a man who occupies a high position in his college, and in so far ought to tread warily and set an example. His conduct is that of too many who creep into conspicuous positions,—viz., a mixture of insincerity and professing righteousness, which does not always succeed.

The natural interpretation of the two contradictory letters is not far to seek, and is probably this: On noticing the book (being an authority on the subject), he writes to the author a fulsome letter, evidently not the outcome of careful study of the work (for he does not even remember it), but in order to impress himself upon the writer, who lives out of London, and who might have patients coming up to town, which patients might wish to know whom to consult when there. The *tout ensemble* of the thing looks most

suspicious. And when the flattered author makes another use of the letter to what its writer expected,—viz., employs it for advertising purposes,—the writer gets up some virtuous indignation and writes another letter of totally opposite character. In this instance the schemer fell into his own trap in a manner utterly unexpected. It is a trifle, but it reveals a depth of depravity that is certainly not assuring at a time when the medical profession is writhing in the agonies of all-round snubbings, when the Medical Amendment Bill has been twice rejected by Parliament, when the medical press has been using forcible language to the Corporations, and even when the conduct of the General Medical Council has been the subject of some strong animadversions. Self-respect leads to the respect of others; and our profession at present seems only too strongly inclined to give the enemy opportunities of which it avails itself, to the detriment of the profession and the regret of those of it who see clearly what the real position of affairs is, and how small are our prospects of raising it if leading members of the profession act as the writer of the letters just referred to has done. It is piteous to see men of position dropping themselves by their own deeds and doings into such very questionable positions, from which a little self-respect would save them. It is the old story over again. When Moses tarried on Mount Sinai for the tablets containing the Decalogue, Aaron in the mean time gathered the gold of the tribes and made a molten calf, and the people worshipped, crying, "Here be thy gods, O Israel, which brought thee up out of the land of Egypt!" So it was then, and so it is now. And the worshippers of the golden calf are after idolatry yet! We certainly do seem in need of some other gods than those in vogue at present.

Those of the inhabitants of the United States who feel an interest in forthcoming generations will read with a sense of instruction a small work on "Dental Caries" just issued by Henry Sewill, a well-known dentist here. It is not so much the pathological relations of the wide-spread evil, but its causal relations, which will attract their attention. Mr. Sewill holds that as civilization progresses the jaw lessens, and then the teeth are imperfectly developed, and, consequently, from cracks or pits in the enamel of these teeth the immediate causes of caries make their way into the tooth, and so work its ruin. As the teeth of the inhabitants of the United States are notoriously in a bad way, it may be well for those intending to marry to know that "crowding and irregularity of the teeth are mostly caused by smallness and malformation of the maxillæ,—a condition which is, no doubt, largely associated with the physical type presented by highly-civilized man." Consequently, "sexual selection" is a great force in action. "The type of female beauty for many ages has included a small, delicate jaw, the heavy jaw, or anything approaching to prognathism, being universally deemed a disfigurement." However desirable, from the point of view of tooth-development, it might be to select a spouse of the "mickle-mouthed Meg" type, who so exercised the mind of one of the ancestors of Sir Walter Scott, it is scarcely to be expected that a man will marry for the sake of the teeth of his grandchildren. Mr. Sewill, indeed, seems to see this, for he adds, pathetically, "I am afraid we cannot hope that, for the sake of the teeth of posterity, men will be advised to pick out big-jawed wives; but we can, at least, seriously impress hygienists with the fact that the human jaw, for its due development, needs adequate use, and that no dietary, however otherwise suitable its constituents, can be perfect which is composed of uniformly bland and soft substances calling for little or no mastication." And then he falls foul of the French cook, as follows: "The French use their jaws less than any other nation; they are the best cooks in the world, and the whole population, without exception, lives upon the softest food, including bread of the most delicate manufacture."

Having thus laid a ban upon "beauty's bewitchment" with a delicate chin in the choice of a wife, and pointed the finger of scorn at the French cook, it is a relief to find that he feels no animosity or rancor towards the schoolmaster. "It has been plausibly argued that dental deterioration—and especially progressive deterioration—may be accounted for by the overwhelming demands upon the vital powers by the growth of the brain and its increased exercise in modern life. The brain and the jaws are alike fed from the common carotid artery, and, it is urged, the demand for blood by the growing and working brain leads to imperfect supply of the masticatory organs. This argument gains support from the fact that the people of the United States, with certainly the worst teeth, present a type of humanity one of whose most striking characteristics is enormous activity of brain and nervous system, with expenditure of vital energy through these channels. But I believe that we shall find this hypothesis will not work, and it remains hypothesis, difficult of negation, impossible of proof." Just think what a long sigh of relief the founders of general education in New England must draw at this expression of opinion,—that is, if disembodied spirits possess inspiration. Perhaps those beings in "astral forms" (*à la* Madame Blavatsky) will kindly convey Mr. Sewill's opinions to the shades of these Puritan worthies as a work of human charity!

In case any spirited American citizen, fired by Mr. Sewill's remarks, wishes to sacrifice himself and his tastes in order to secure a perfect set of teeth for his descendants, the

writer could recommend to his attention the "Earthmen" (and women) from the Kalahari Desert, in South Africa, now on show at the Aquarium, Westminster. They are the most complete savages on the globe (unless it be that lowly tribe living in California, the Digger Indians"); but they present ideally perfect teeth to the eye of the observer,—teeth the enamel of which is perfect, without flaw through which acids and bacteria could penetrate into the interior. How far, however, against this tooth-perfection may weigh sundry drawbacks it is impossible to say. Their women do not seem calculated to form intellectual companions for civilized men; and though the jaws which carry these perfect teeth are not remarkably prognathous, still the face is not attractive, nor its expression very *spirituelle*. If, however, in his new-born enthusiasm he is willing to cast aside everything as compared to dental perfection, he could find a bride to his mind among these human vipers,—for little yellow brutes with poisoned arrows are these "Earthmen."

What Mr. Sewill does regard as a great cause of that imperfect development of enamel which predisposes to caries the reader must seek in the book itself, which is replete with information of much practical value. If the reader is not equal to the self-denial of espousing a big-jawed savage, it may be no breach of confidence to tell him what Mr. Sewill thinks it well to avoid in a wife: "This is the type most frequently found in females in which there is often, with a fragile form, considerable facial beauty; in which the eyes are large and expressive, the complexion fair, with the blue veins visible beneath the skin. This is the not uncommon type which, without further description, will be recognized, and in which I have invariably found the teeth, although well shaped and often uncommonly white and beautiful to look at, covered with the softest and most defective enamel."

Really, what betwixt Dr. Crichton Browne and Mr. Henry Sewill,—too much education and perverted ideas of beauty,—civilization seems to be progressing too fast for the physique of the future.

J. Milner Fothergill.

CHICAGO.

SINCE my last letter the new Presbyterian Hospital has been formally opened and patients admitted. The building, though not large, is well appointed, and possesses all the modern and most approved conveniences, ventilation and heating being so arranged as to give the best results. The beds, as soon as ready, have been quickly occupied, and at this time everything about the hospital is moving smoothly and satisfactorily. The interest of Rush Medical College in this institution was transferred to the Presbyterian Board, with the understanding that the trustees of Rush should appoint the medical and surgical staff. This has been done in as impartial a manner as possible, but not without some dissatisfaction to the other medical schools of our city. Some of the positions were tendered to members of the several faculties of our schools, but were declined by the gentlemen to whom they were offered, on the plea of not having necessary time for the proper administration of the duties; others stating that the hospital was at an inconvenient distance, etc. The result is that the new hospital has been styled a "mere appendix to Rush Medical College."

The facts are that the staff is a good one, and, though strongly represented by Rush, no fair-minded observer can offer reasonable objection, in view of Rush Medical College having transferred to the Presbyterian Board all interest (not by any means insignificant) in the property, and all control other than appointment of staff for service.

Our County Asylum for the Insane is now the scene of great contention and not a little disordered investigation. For many years this institution has been the prey of political hangers-on, the different offices being too often filled by persons wholly incompetent,—each official enjoying a sinecure, delegating his duties to subordinates or patients. In addition, there seems to have been systematic misdirection of the charity,—funds finding a resting-place in the pockets of interested leeches, and patients left without necessary care and bodily comforts. A few months ago Dr. Spray retired from the superintendency, and was succeeded by Dr. J. G. Kiernan, who at once joined hands with Dr. S. V. Clevenger in an effort to bring about needed reform in the administration of the general affairs and the treatment of the patients.

These gentlemen found six hundred and fifty people huddled together in quarters barely sufficient to accommodate three hundred. This condition could only be partially ameliorated, and Drs. Kiernan and Clevenger addressed themselves to the correction of the most flagrant abuses, and in so doing excited the wrath of the County Board. For a time there was a war of words, and then came positive action on the part of the superintendent. Inefficient subordinates were discharged, and their places filled by persons selected by Dr. Kiernan without reference to the wishes of the politicians.

This was followed by a bitter controversy with the former superintendent, resulting in threats of violence against Dr. Clevenger, the pathologist.

In a short time Dr. Clevenger succeeded in interesting the Citizens' Association in the affairs of the institution, and an investigation was commenced. He has, in addition, sent copies of a printed letter to the members of

the County Board, reciting that the employés are in a state of rebellion against the superintendent, and that the medical officers will be compelled to resign unless they take some action. At the last meeting of the Chicago Medical Society the case was again stated by Dr. Clevenger, and a committee of professional men was appointed to act with laymen in an examination of the charges preferred by the officers of the asylum.

While the abuses are beyond question, the means for their correction have not been well directed, because of the too personal character of the controversy. The same thing might be said of more than one of our State institutions; but it is not likely to be said as long as the present political qualification system prevails.

Scarlet fever is quite prevalent, and in this connection it is quite interesting to observe how many householders and others avoid open display of the red card. By a little persuasion, the visiting health officer nails the caution-card upon an inside door, often back at the end of a dark hall, where it cannot be seen. This practice is most common in large boarding-houses, where it is the more reprehensible as it assists in the spread of the disease by begetting a false sense of security.

Diphtheria is beginning to attract attention, and fears are expressed that it is likely to become wide-spread.

Our medical schools have entered the fall term with increased numbers over those of last year, and the graduating classes will be larger than ever before. M.

November 18, 1884.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THE Semi-Annual Conversational Meeting of the Society was held October 23, 1884, the President, E. O. SHAKESPEARE, M.D., in the chair.

Dr. FRANCIS DELAFIELD, of New York, by invitation, read a paper on

*The pathology of broncho-pneumonia.**

Dr. PEPPER said he had listened with very unusual interest to the paper of Dr. Delafield, in which he had so distinctly and concisely set forth his views on this very common disease.

He thought that all who had listened to Dr. Delafield would agree with him in congratulating the author upon the clearness and force with which he had described a condition which had hitherto often been confused by prolix description and by want of definiteness in separating different anatomical conditions. In regard to the term "broncho-pneumonia," which Dr. Delafield prefers, he has proved by his anatomical studies of the infiltration of the bronchial walls and of the surrounding parenchyma, that this term is strictly applicable to the cases upon which this paper is based.

Dr. Pepper stated, however, that, though chiefly from a clinical stand-point, he was inclined to prefer the term catarrhal pneumonia, as probably including the form described by Dr. Delafield, as well as certain other forms which seem to him to be necessarily included in a complete picture of the disease.

For instance, there are many cases in adults which begin with rigor, followed by high fever, with temperature of 102½° to 104° F., with cough hard and dry at first, and later with muco-purulent expectoration, with no very definite physical signs. Careful examination will show local impairment of resonance, coarse crackling râles on deep inspiration, and weak vesicular murmur. This condition may be limited to the apex or to the neighborhood of the root of one lung, or may occur elsewhere. The cases have a duration of from eight to twelve days, and terminate by lysis with resolution, though not rarely some cough remains, and the lung is sensitive and prone to recurring attacks, which in subjects predisposed to phthisis may induce that disease.

It seems to him difficult to regard these cases as anything else than mild catarrhal pneumonia; for this type of pneumonia agrees with other catarrhal affections in the wide range of severity presented by different cases. On the other hand, there are cases, much more common in children, in which disease extends from the bronchial tubes into the lobules to which they lead.

The commonly-accepted opinion that the lining of the alveoli and air-vesicles is susceptible to catarrhal inflammation, appears to me well established. In such cases the disease may extend outward to the peribronchial tissue, as emphasized by Dr. Delafield, and lead to secondary interstitial changes, and also, in consequence of obstruction of bronchi, atelectasis occur; the aspiration of irritating bronchial products may fill some of the alveoli, or finally they may become impacted with the results of catarrhal inflammation of their walls. Subsequently, caseation with softening may give rise to small abscesses with breaking down of the walls of the air-vessels, or with perforation of the pleura, or inspissation may occur with reabsorption of infectious material, with the development of general tuberculosis.

It did not seem necessary to dwell upon the cases in which atelectasis occurred as a primary condition with the subsequent development of pneumonic centres.

It seems to him impossible to consider ca-

* See page 153.

tarrhal pneumonia without taking the comprehensive view which would include all the varieties above indicated; though the term "broncho-pneumonia" as used by Dr. Delafield might be most appropriate to the special conditions described by him.

Allusion was made to the very interesting physical signs attending the course of atelectasis in the course of catarrhal pneumonia of children or of adults, where considerable areas of the lung, or even an entire lung, might pass into this state, to be followed before long by the re-establishment of respiration and the disappearance of the physical signs. Difficult questions of differential diagnosis may present themselves, requiring critical examination. From an allusion made by Dr. Delafield, it appeared that he regarded lobar pneumonia as being, like broncho-pneumonia, induced by the ordinary causes of idiopathic inflammation. The argument, which did not favor the view that all lobar pneumonia is a specific constitutional disease, or is dependent upon a special microbe, did not appear to be conclusive, and he was glad to know, from the remarks of Dr. Delafield, that he holds the same view.

Dr. BRUEN said he rose to call attention to the observations of Hamilton, of Aberdeen, in reference to the peculiar basement-membrane of the bronchial tubes, which determines the chronicity of bronchitis, and probably the interstitial changes in chronic broncho-pneumonia. Hamilton, in speaking of the denseness of this basement-membrane, gives it the importance of a fascia, which determines the direction in which the inflammatory products of bronchitis shall be absorbed,—viz., by the lymphatics rather than by free exudation into the bronchial lumen. The interlobular connective tissues are permeated with fibrous bands, which radiate from the fibrous coat of the bronchi towards the pleural surface. Dr. Bruen thought that, if careful study of the lymphatics were made, the absorbed products of an acute or subacute inflammation could be traced throughout the lung, finally leading to enlargement of the bronchial glands.

The importance of the basement-membrane is further illustrated by the phenomena of pneumonikoniosis and anthracosis. Immediate absorption from the bronchial tubes does not occur, although the tubes are always exposed to carbonaceous matter, as evinced by the blackened sputa, yet the tubes are unpigmented, the carbonaceous or organic dust being carried down into the alveoli, whence it is absorbed, and the whole parenchyma of the lungs and the bronchial glands are blackened, but always strictly in the course of the lymphatics.

In children of a strumous habit, forms of bronchitis of an obscure nature often occur. Congested areas near the root of the lung are recognizable; abundant mucous râles and frequently laryngeal spasm at intervals form an important symptom. These symptoms are often referable to enlargement of the bronchial glands, and the nervous symptoms are due to irritation of the pneumogastric nerves.

Dr. J. C. WILSON asked whether Dr. Delafield designed to describe one variety of a group of affections to which the terms broncho-pneumonia, catarrhal pneumonia, desquamative pneumonia, etc., are somewhat vaguely and interchangeably applied, or to include the whole group in his account, and under the designation of broncho-pneumonia. If Dr. Wilson had understood the paper aright, he thought it certainly had referred to an especial variety of the affection in question, for there are encountered cases which differ both clinically and anatomically from the disease described by Dr. Delafield, and in which the lesions spread not only in a direction internally, from the affected bronchial tubes to the peribronchial structures, but also in the direction of the long axis of the tubes to involve the terminal (subpleural) vesicles, and this, according to widely-accepted views, often without antecedent atelectasis.

Dr. CARPENTER said that he had very little, indeed, to give of value in a pathological discussion, but would say, at the same time, that after thirty years' experience he had arrived at certain conclusions, not perhaps new, but which had been gathered in one set of cases, —viz., anthracosis. They are a very striking set of cases. They all originate in a bronchitis, which differs from the ordinary form of that disorder in one very striking symptom,—viz., great oppression of breathing. This oppression is far greater than can be accounted for by ordinary bronchial inflammation. It depends on interstitial disease or peribronchitis. A true broncho-pneumonia is set up, the cause being a special one,—viz., inhalation of coal-dust. In these cases so great obstruction to the circulation is caused by the interstitial exudation that the circulation is very seriously embarrassed. The heart suffers, dilatation, or hypertrophy with dilatation, is produced, and a form of dyspnœa, known as miner's asthma, occurs. These cases are essentially chronic ones. He had only the day before seen a patient die with this disease who had been under his care for several years, and in whom no lesions but those of peribronchitis could be detected.

Many of these cases, however, in a chronic progress, do develop all the symptoms of phthisis. Slow alterations of structure occur, cavities form, and all the pathological conditions of the so-called fibroid phthisis are found on post-mortem examination. He therefore claimed that these cases are entitled to constitute a special form of broncho-pneumonia. He agreed with Dr. Pepper that acute or subacute broncho-pneumonia left sensitive areas, leading often to subsequent phthisis. In his observation, fibroid phthisis was not a true tuberculosis, but a chronic de-

generation of lung-tissue, due to a pre-existing broncho-pneumonia, such as he had observed in anthracosis.

Dr. OSLER said that his experience in many points tallied with that of Prof. Delafield. In the broncho-pneumonia of adults the pneumonic process, he believed, most usually spreads from the bronchi. He referred also to those cases of broncho-pneumonia which followed brain-injury, or disease affecting the pneumogastric centres. In such cases the disease was deeply seated, and we find that the morbid process often surrounds the bronchi but does not involve the terminal alveoli. The reverse is true in the case of children, in whom the disease is more peripheral, is nearer, and may be just beneath, the pleura. He was glad that Dr. Carpenter had raised the point as to anthracosis. Dr. Osler had been able to examine several cases of this affection in its very early stages, and could testify that it begins in the bronchi and thence extends to the peribronchial tissues. It is primarily then a broncho-pneumonia, and in every case he had found small disseminated black lumps resulting from localized broncho-pneumonia, which, by their fusion and extension, produce a form of fibroid phthisis.

Dr. TYSON had little to add to what had already been said. He had, however, first expressed his gratification at the simple clearness with which Dr. Delafield had presented the question. Dr. Tyson had been very much impressed with the diversity of nomenclature of the disease under consideration, and it would be usful if we could agree upon some common term. For a long time desquamative pneumonia had seemed to him to be the best term, but from a study of the pathological histology he thought the term peribronchial pneumonia more suitable. If now the adjective desquamative be added, we have a term which will be still more comprehensive and exact.

Dr. Tyson thought that our understanding of the enormous peribronchial cellular infiltration would be much simplified if we lose sight altogether of the idea that there is essentially any form of inflammation except interstitial inflammation. He had come to the conclusion that there is no such thing as catarrhal or parenchymatous inflammation, the phenomena usually considered characteristic of these being secondary. The wandering out and massing of leucocytes is the one essential factor of the inflammatory process. He would like to ask Dr. Delafield where he would draw the line between this process and tubercular phthisis. He presumed that Dr. Delafield agreed with all other observers in admitting that broncho-pneumonia does sometimes terminate in tubercular phthisis, and when this occurs it is often difficult to say where the broncho-pneumonia ends and where the phthisis begins, although the extremes may be easy of recognition.

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Dr. FORMAD would like to ask the lecturer's instruction how to distinguish broncho-pneumonia in its *chronic* form from *tubercular* broncho-pneumonia. Like Dr. Tyson, he felt that he was unable to draw a line of distinction between the two affections. Indeed, he had been unaware of a non-tubercular form of broncho-pneumonia in man until he saw Dr. Delafield's excellent records and representations of this lesion; this being explained by the fact that he had dealt almost entirely with the dead, while most of the speakers had shown that, although broncho-pneumonia in its *acute* form was a common disease, it did not prove fatal in the vast majority of cases, the patients either getting well or the disease assuming a chronic course.

Dr. Formad fully recognized *acute* broncho-pneumonia as an independent affection, although he believed to have observed this lesion post mortem only in dogs, such as induced artificially by means of forced inhalations of a spray containing irritating particles. Dogs with such artificial broncho-pneumonia (even if tuberculous sputum was resorted to to induce it) Dr. Formad had observed always to recover within a couple of months; but if the dogs were killed before the end of the first month after the operation the post-mortem showed invariably an acute broncho-pneumonia not distinguishable from that described by Dr. Delafield as occurring in man. Throughout the lung-substance are seen small nodes of irregular outlines in size resembling tubercles.

Under the microscope these nodules show to consist of mere unorganized collection of cells, often in a state of retrograde change and mixed with mucus and débris; this exudate being limited to the lumina of the bronchials and their pertaining groups of air-vesicles (the acini) which they fill. On section these artificial boundaries give rise to the appearance of nodes. Very often epithelial cells and mucus from the bronchi have been seen intermingled with the purulent contents within the air-vesicles; this suggests that the exudate contained in the latter may have been partly aspired from the bronchi (during forced breathing) and was lodged in the air-vesicles as foreign material.

These lesions have been mistaken by stupid observers for true tubercles. *Acute* broncho-pneumonia in man appears to be a lesion perfectly analogous to the one described above in dogs. The human disease once becoming chronic, its distinction from tuberculous broncho-pneumonia ceases.

Dr. DELAFIELD, in closing the debate, said that all the speakers had brought out what was one of the most difficult points concerning broncho-pneumonia, namely, its limitations. Strictly speaking, every pneumonia is a broncho-pneumonia, and the application of the term to a certain group of cases is of course arbitrary. He believed, however, that the

name is most properly employed to designate the group of cases which he had described.

In anthracosis there is a chronic bronchitis and also a chronic pneumonia, but yet the lesion is not, properly speaking, a broncho-pneumonia.

He did not believe that the inflammation travelled directly from the bronchi to the air-vesicles into which they entered, but that the appearances which simulated this were due to atelectasis.

He thought that the term catarrhal pneumonia was a very bad one, and that the air-vesicles were structures entirely different from mucous membranes.

He did not believe that broncho-pneumonia was a form of phthisis or led to phthisis, but that phthisis had its own special anatomy from the very beginning.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, NOVEMBER 6, 1884.

The President, R. A. CLEEMANN, M.D., in the chair.

REMOVAL OF UTERINE APPENDAGES FOR MENSTRUAL EPILEPSY—RECOVERY.

DR. E. E. MONTGOMERY exhibited the specimens and read the history of the case. Sarah H., æt. 17 years, was admitted into the Philadelphia Hospital April 1, 1884. She suffered from an attack of inflammatory rheumatism in childhood, and began to have epileptic seizures in her thirteenth year. These were slight at first, but have recurred every month, increasing in number and violence, so that at present she is unconscious from ten days to two weeks out of each month. There has only once been a trace of menstrual discharge, and that for a single day only. There is no history of any chronic disease in the family: brothers and sisters are healthy. The patient was pale, flabby, anæmic, poorly developed, and extremely nervous. The external genitals were but slightly developed, the uterus small, and no special tenderness over the pelvis. Iron, tonics, and a generous diet were given; the bromides were not well borne. Owing to her youth and the fact that she had not yet menstruated, it was deemed best to undertake to establish the menstrual function and exhaust the antispasmodics before resorting to operative interference. The failure of all remedial measures was complete, and on September 13 the operation was performed; both ovaries and tubes were removed. No antiseptic was used about the wound. All the water used had been well boiled. Absorbent cotton was placed over the wound, which had been closed with silk sutures. The operation occupied thirty-five minutes. The recovery was uninterrupted until the night of the 26th of September, when she had four epileptic seizures. There were recurrences of slighter attacks during the next three nights, but they were shorter, and during the intervals she was perfectly conscious. During the first four days of October, spells of staring, with momentary unconsciousness, occurred, becoming less frequent and lighter. A well-marked convulsion on the night of October 14 was followed by from one to four convulsions daily until the 29th. But they have not been so severe as before the operation.

REMOVAL OF PAROVARIAN CYST—RECOVERY.

Dr. E. E. MONTGOMERY presented the specimens and related the history, as follows: Mrs. A., æt. 30 years, native of England, married, never pregnant, has suffered from an enlargement of the abdomen for seven years. As it was first noticed a few months after her marriage, she supposed herself pregnant. Her menses have never been interrupted, now occur every three weeks, are very slight, and have never been excessive. She suffers from severe pain the week before menstruation over the lower portion of the abdomen and through the hips. She suffers at other times from pain in the feet and legs and from a sensation of weight. The tumor has been tapped some six times; the fluid was always of a pale straw color. The largest quantity removed at any one time was forty pounds. Previous to its removal her weight was one hundred and two pounds. The last tapping was on June 27, 1884. She has had four attacks of peritonitis.

When first seen, last July, two weeks after the last tapping, the abdomen was swollen and tender to pressure; fluctuation was distinct. Since that time the abdomen has increased considerably in size, presenting a prominent tumor, distending the whole abdomen, nearly symmetrical, but projecting slightly to the right side. Circumference at umbilicus, thirty-two inches; distance from symphysis to umbilicus, seven inches; to ensiform, thirteen inches. Fluctuation distinct over the whole tumor. Coughing projects the whole mass forward and downward. Her general condition is good; she is quite active.

Diagnosis.—A parovarian cyst.

Plan of Operation.—Exploratory incision, remove the tumor if possible; but, if the adhesions were too great to permit that, then to open the sac, stitch it to the integument, and introduce a drainage-tube, and thus secure obliteration of the sac.

Operation.—October 9. Abdominal wound four inches; adhesions universal, but generally broken up without difficulty; no ligatures were needed. The intestines were not seen, being concealed by old inflammatory

deposits. The right ovary was enlarged, and was also removed. The wound was closed with seven sutures, and a glass drainage-tube introduced. Salicylated cotton in a thick layer was placed over the wound. Suppositories of morphia were used to control pain, which continued to a greater or less extent for two weeks, arising partly from inflammatory conditions and partly from collections of gas in the intestines. The abdominal wound discharged freely, three ounces the first day. The drainage-tube was removed on the 13th, four days after the operation, but the discharge of bloody serum, pus, and flaky lymph continued for full two weeks later, when the wound closed entirely and the patient was discharged.

Dr. B. F. BAER presented the specimens and read the following report of a case of

PLACENTAL POLYPUS WHICH SIMULATED MALIGNANT DISEASE OF THE UTERUS.

The patient was 35 years of age, married, and had two children at full term, the last twelve years ago. She has had several abortions since, but otherwise she has enjoyed good health. Her mother died at the age of thirty-eight, of cancer of the uterus. In the early months of this year our patient first noticed that her catamenia were becoming too frequent and were attended with expulsive pains and a fetid, watery discharge in the intervals. The blood-loss increased in quantity, and she soon began to show signs of failing health in pallor and loss of flesh. She would not permit a physical exploration until the latter part of July, when she had a violent flooding, with great pain.

Examination now revealed to Dr. R. Armstrong, of Lock Haven, Pa., whose patient she was, a healthy condition of the cervix and a normal os, but the body of the uterus was enlarged to more than double its natural dimensions; it seemed to be symmetrical and rather softer than usual. The hemorrhage was controlled by ergot and rest. Although the grumous fetid discharge and the uterine tenesmus continued, she did not have another severe attack of metrorrhagia, probably because of her exsanguine condition and the fact that she was suffering from septic absorption. Her temperature rising as high as 104° in the afternoon, she had distinct rigors. Her abdomen was tympanitic and very tender to the touch. The physical condition of the uterus led the doctor to introduce two tents into the cervical canal on September 23. They were allowed to remain twenty-four hours, although their presence increased the violence of the symptoms. When the tents were removed, a rather soft, friable mass could be felt presenting at the internal os. This led to a fear that the disease might prove to be malignant. A severe colliquative diarrhœa now set in, and the patient's strength became so much reduced that nothing could be done except to administer remedies to check the diarrhœa and prevent collapse.

On the morning of the 25th, through the kindness of Dr. Armstrong, I saw the patient. Temperature 103°, pulse rapid and weak. Stomach irritable, rejecting everything taken, bowels still quite relaxed. Her face presented the ashy hue of malignant disease. The outlook was not favorable for an operation, which would necessitate the dilatation of the cervix sufficiently to remove the diseased tissue, which evidently occupied the uterine cavity, but it was the only course to pursue.

Ether was administered. The uterus was found retroverted and adherent to the floor of Douglas's cul-de-sac. The cervix was rigid and but slightly patulous. In view of the existing peritonitis, we concluded that it was best that I should endeavor to remove the contents of the uterus without a further attempt at dilatation, fearing rupture of adhesions and increased inflammatory action. I passed the wire loop of the écraseur through the os, and by careful manipulation luckily succeeded in getting it over the tumor and up to its attachment. Drawing upon the wire, it closed around the pedicle and severed it. The tumor was seized with a volsella forceps and delivered. The index-finger could now be passed into the cavity of the uterus. The pedicle was situated on the posterior wall, near the fundus. The tissues at that point were soft and friable, but the remainder of the surface of the uterine cavity appeared to be free from disease. The stump was cauterized with nitric acid and a two-grain opium suppository placed in the rectum. Convalescence was rapid and satisfactory.

On section and close examination the specimen very much resembles placental tissue, and the microscope shows typical placental villi in its structure. It is the *placental polypus* described by C. Braun in 1851, and somewhat resembles the *fibrinous polypus* of Kiwisch, who thought that these polypi might arise from long-persistent hemorrhage, a kind of apoplexy of the womb, a large coagulum forming, the upper part consisting mostly of fibrin and adhering by a stalk to the uterine wall, whilst the lower consists of red, soft coagulum having a coat of firm fibrin. Scanzoni does not admit this view. He contends that these are cases of abortion, and would therefore fall under the class of placental polypi (Barnes). My own experience agrees with that of Scanzoni. These polypi cause profuse metrorrhagia, and sometimes, as in this case, blood-poisoning.

This case furnishes another strong argument in favor of the entire removal of the decidua or placenta after abortion. Who can tell how many lives are lost, or in how many cases the health is undermined, by a neglect of this procedure? Death would inevitably

have occurred in this case if the uterus had not been emptied. The patient may suffer for months or years as a result of neglect. In this instance the fault was in the patient, for she had been properly advised by her physician. It is true that many cases escape without serious injury; but that does not prove that the principle and practice of immediate removal is not always the safe one, for here is a case where a neglected abortion had apparently passed off safely, but it almost destroyed the patient's life a long time afterwards.

Malignant disease was properly suspected from the rapid development of such grave symptoms, from the general cachectic appearance of the patient, and from the sensation conveyed to the finger when touching the growth *in situ*. But when it was found that it had a limited point of attachment and that the uterine cavity was healthy at all other points, this hypothesis was weakened, and when more careful examination of the specimen and investigation with the microscope showed it to contain placental villi, its benign character was assured.

Dr. MONTGOMERY remarked that in cases in which partial dilatation of the uterine canal had been accomplished before the patient presented, the best instrument to continue the dilatation is the mechanical urethral dilator of Dr. A. H. Smith.

HAIR-PIN IN THE UTERUS.

Dr. B. F. BAER exhibited a hair-pin removed from the uterine cavity of a patient sent to him by Dr. Pancoast, of Camden, New Jersey. The woman, believing herself to be pregnant, had tried to produce an abortion by inserting the pin by grasping the points and inserting the blunt end. The patient had obtained a view of the parts in a mirror placed upon the floor. The presence of the pin was readily detected by the uterine sound. He at first thought of dilating with tents, but, the patient being greatly alarmed and very importunate, he used the steel dilator. One point of the pin became embedded in its descent in the tissues of the cervix, and required dissection to release it.

Dr. WHARTON SINKLER exhibited a hair-pin removed from the vagina of a patient who had tried to introduce it into the uterus to produce abortion. She had failed in her purpose, and had also failed to remove it from the vagina. The doctor found the points of the pin widely separated, presenting downward, and hooked into the walls of the vagina. By bringing the points close together, the pin was removed without difficulty. It had been in the vagina for some time.

Dr. MONTGOMERY stated that, while a student, he had seen a hair-pin removed from a vagina. It was thickly incrusted with a calcareous deposit.

PHILADELPHIA CLINICAL SOCIETY.

MEETING OF OCTOBER 24, 1884.

DR. BEATES in the chair.

DR. E. E. MONTGOMERY reported a

CASE OF EXTRA-UTERINE PREGNANCY—RUPTURE, PERITONITIS, RECOVERY.

March 19, 1884.—Mrs. M., has had four children and two miscarriages, the last miscarriage occurring some four months since. She has for several years suffered from chronic phthisis. Menstruation was absent for two periods, but two weeks ago she had a bloody discharge for several days. Although she had been suffering from the phenomena usual to her in early pregnancy, she then concluded that she was not pregnant.

On the 18th, after a fright, she was taken with severe pain in the right side, which, continuing to grow worse, was attended by frequent micturition, a sensation in the pelvis of weight or bearing down, intermittent vomiting, and a serous vaginal discharge. Her husband called at 3 A.M. to-day (March 19), informed me she had cramps, and asked for a prescription for her relief. I gave a prescription containing morph. sulph., gr. $\frac{1}{8}$ to each dose, to be given every two hours until relief.

I saw her at 8 A.M., when she was quite pale, complaining still of pain in the right inguinal region. As I had a clinic at 9 A.M., I made a hurried visit, injected morph., gr. $\frac{1}{4}$, hypodermically, and ordered ℞ Quin. sulph., gr. ij, ext. opii, gr. ss, in pill, every three hours.

5 P.M.—Pain somewhat relieved, stomach very irritable, would retain nothing, pain greatly increased by vomiting, face pinched, pale, and anxious-looking, lips bloodless, pulse 90. Bimanual examination disclosed the uterus slightly enlarged and retroverted. Douglas's cul-de-sac presented a mushy or doughy sensation; on the right side could be felt a small, irregular-sized mass, which was diagnosticated to be an escaped fœtus from a tubal pregnancy. The pills were discontinued, and ext. opii, gr. j, in suppository, substituted, to be given every six hours, and an alkaline mixture and f℥ss each of milk and lime-water were given every three hours by the stomach.

20th.—She slept poorly, but does not suffer so much from pain. There is marked tenderness over the lower part of the abdomen, more marked upon the left side. Examination per vaginam; the mass is felt posterior to the uterus, and is quite hard and tender upon pressure. The uterus is fixed; pulse, 90; vomited once. She has been kept perfectly quiet; the bladder relieved by the catheter. ℞ Quin. sulph., gr. v, ext. opii, gr. iss, in suppository, every six hours.

21st.—General condition better, though she slept but little. The introduction of the suppositories was attended with so much pain that they were discontinued, and morph. sulph., gr. $\frac{1}{6}$, with quin. sulph., gr. ij, given every three hours, by the mouth.

22d.—Some sickness of the stomach; pulse 88, temperature normal; very nervous, easily disturbed. Abdomen still tender to pressure. Returned to the use of the suppositories. Slept well last night after tr. op. deod., gtt. xxv, were given.

24th.—Temperature normal. Pulse 80. Abdomen still tender, especially over the lower portion and left side; movement attended with pain. The suppositories induced so much pain that they were discontinued, and tr. op. deod., gtt. xxx, given by the mouth every three hours.

Subsequent to this date the convalescence was gradual. She regained her strength very slowly. She left the city the latter part of July, returning about the middle of September again pregnant.

Upon examination a few days ago the uterus was found enlarged to the usual size at two months, and posterior to it could be felt a smaller mass, in which the remains of the former gestation were evidently encapsulated.

In such cases, it becomes an important question to decide when we should proceed to surgical measures.

Notwithstanding the successful termination of this case, I would not uphold the treatment as the one most likely to yield a favorable result.

Had the symptoms of shock and internal hemorrhage persisted during the third day, as upon the second, it was intended to make an abdominal incision, remove the fœtus and effused blood, and ligate the bleeding vessels. Such a course, pursued with the advent of the characteristic symptoms, would, without doubt, decrease the mortality of the accident.

Dr. MONTGOMERY also reported, for Dr. JAMES SIBBALD,

A CASE OF EXTRA-UTERINE PREGNANCY TREATED SUCCESSFULLY BY ELECTRICITY.

Mrs. R., æt. 34 years; a woman weighing one hundred and seven pounds, of spare build and exceedingly nervo-bilious temperament. Was married when twenty-one years of age, and had a miscarriage about five months subsequently, since which time (for thirteen years) she was never pregnant, although very desirous of becoming so.

Her menstrual periods were always regular and natural up to June 16, 1884, at which time there was no sign of menstruation. One week later she commenced feeling sick in the morning, and also complained of soreness, with decided tenderness, on pressure over the right inguinal region, which gradually increased in severity. At the same time bloody discharges would appear, with no regularity, every week or two, lasting from a few hours to several days.

On July 3, while standing in the street dealing with her butcher, she was suddenly seized with a violent pain in the abdomen, which caused her to fall in the street. She was picked up and carried to her bed. Morphia was administered hypodermically and poultices applied for six days before the tenderness subsided. For the next three weeks there was more or less tenderness over the right inguinal region.

On August 4 (just one month after the first attack) she had a second attack of local peritonitis, which lasted five days. At this time she was sweeping the floor, when she suddenly fell, overcome by the severe abdominal pain.

After the acute symptoms of the first attack had subsided, a vaginal examination revealed a soft mass on the right side of the uterus, very sensitive to pressure, and displacing that organ to the left. The sound was passed cautiously into the uterus a distance of over four inches, without obstruction. These facts, in connection with the cessation of menses, morning sickness, some enlargement and soreness of breasts, with occasional bloody discharges from the uterus, warranted a diagnosis of extra-uterine pregnancy.

On August 18 Dr. Montgomery saw the case in consultation, and coincided in the diagnosis. He advised the destruction of the fœtus, which was now in about the eleventh week of gestation, by means of electricity. Eight applications of the battery were made, which had the desired result. The mass is slightly perceptible on examination at the present time, the womb being still displaced to the left side. Menstruation has returned twice since, being perfectly normal, and no inconvenience is now experienced.

DISCUSSION.

Dr. JOHN B. ROBERTS coincided with Dr. Montgomery as to the advisability of performing laparotomy where the symptoms of rupture continued urgent.

Dr. G. BETTON MASSEY, replying to a question put by Dr. Barton, said that the form of electricity depended on the work to be done in a given case. Electricity is called upon for two separate and distinct functions in extra-uterine pregnancy,—to kill the fœtus and to produce its absorption. In the former case a somatic death of the germ contained in the tumor is desired; in the latter merely a molecular death or change. In this latter instance, where the death of the fœtus has occurred, and we merely wish to promote its absorption, together with any effused blood or other material, the indications are almost exactly similar to those of any other intra-abdominal tumor: the current with greatest electrolytic

power—the galvanic—is to be preferred. On the other hand, if we wish to arrest the onward progress of life in the fœtal mass in the interest of the unfortunate mother, that current which will accomplish this object with least danger to the mother is to be preferred. This is undoubtedly the faradic current. Shock must be the quality of value here. It is simply a question of transmitting a sufficiency of shock through the abdominal walls of the mother to the more vital parts of the fœtus. If the ordinary faradic battery were not strong enough, the gravity of these sad cases would even warrant the building of a weak dynamo for the special purpose. As to the method of application: the external percutaneous passage of the current by moistened electrodes would seem to be the best; a vaginal electrode might be used, however, the principal endeavor being to send the current directly through the tumor. Drs. Thomas and Mundé have recently reported a number of cases to the American Gynæcological Society, where successful results had followed the use of electricity. To his mind, however, their remarks, as reported, lacked definiteness in this matter of the choice of current and the exact object desired in the individual case. Dr. Thomas does not advise the use of electricity after the fifth month, but an operation instead. Possibly he anticipates difficulty in then producing death, but this could be overcome by increasing the strength of current in the manner above indicated; even if an operation were afterwards performed, the previous arrest of the placental circulation might be of value.

In response to inquiries from Drs. Hall and Roberts, Dr. Massey said that an insulated sound with free extremity would form an excellent vaginal electrode, but that the use of acupuncture needles is totally unnecessary.

Dr. Montgomery, in closing the discussion, said that he had applied one electrode in the vagina in contact with the uterus, and the other over the hypogastrium. He thought acupuncture unnecessary, though it was formerly the practice to use this procedure, as it was liable to cause peritonitis from the liquor amnii escaping into the peritoneal cavity. There is but little difference in the use of either current. There were two reasons why electricity was unavailable after four and a half or five months. The liability to rupture was greatest in the early months,—before the third month. After that we may as well allow the case to go on to a later month, as an operation will be necessary anyway. A large fœtus is more dangerous to the mother after loss of vitality, and cannot be allowed to remain. Although the woman had fallen in the case related, he thought the fœtus was still living, and therefore advised the electricity with the direct purpose to kill. Subsequently the tumor became smaller. The fœtus and appendages become encapsulated in the abdominal cavities of the mothers in these cases. There is no advantage in destroying the fœtus prior to operation.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held November 6, 1884, Fordyce Barker, M.D., LL.D., President, in the chair.

The first scientific paper of the evening was read by Dr. R. W. Amidon, entitled

THE PATHOLOGY OF SENSORY APHASIA, WITH A SPECIMEN.

The history of the case which had come under Dr. Amidon's observation was, in brief, as follows: The patient was a female, aged 60 years, who had been well up to the time of the menopause, nine years before. Since then she had suffered from flatulent dyspepsia, headache, and other evidences of a neurasthenic condition. Six weeks before Dr. Amidon saw her (which was in June, 1883), she had had a severe headache on the left side, which continued for three days, when she became excitable and flighty in mind, and vomiting occurred. When Dr. Amidon made an examination of the patient he found the right pupil larger than the left, the tongue deviated slightly to the right; the right hand was tremulous and had lost strength, but there was no marked disturbance of motility; the fundus oculi appeared healthy, and acuity of vision was normal. The patient gave inappropriate answers to questions, was unable to count or say letters, could not be induced to write, but she could speak intelligibly of her own accord. She recognized all her friends except her husband, and she called her son "father." Hearing was apparently normal. She could sing correctly. After this she was subject to periodical attacks about once a month, when she would utter a cry, throw up the right hand, then the mouth would be drawn to the right, and a general convulsion would follow, sometimes with involuntary evacuations. February 15, 1884, she had one of these attacks. The next day she was comatose, and died in that condition.

At the autopsy the kidneys were found to be the seat of advanced interstitial changes. The right cerebral hemisphere was normal; on the surface of the left there was an irregular depression caused by destruction of cerebral tissue, involving the inferior parietal lobule, the angular gyrus, and the second occipital and first temporal convolutions. The arteries in this region were atheromatous, and one was entirely occluded.

Dr. Amidon then quoted cases, illustrated by diagrams, which had been reported by Balzer, d'Heilly and Chautemesse, A. B. Ball, Chauffard, Giraudeau, Seppilli, and about fourteen others. Of the twenty-four

cases reported, in eight the lesion affected both the visual and auditory cortical regions of the left hemisphere, and there was both word blindness and word deafness. In two cases the area of vision alone was involved, and there was word blindness. In fourteen there was lesion of the auditory region, with word deafness.

Dr. Amidon gave the following conclusions: That *word blindness* is an incapacity to understand speech, printed or written, vision and intelligence being preserved. It is generally dependent upon destructive lesion of parts of the inferior parietal lobule, angular gyrus, and second occipital convolution of the left side. Its mechanism consisted in an abolition of the transformation of written words into verbal images.

Seppilli's conclusions with regard to *word deafness* were that this condition represented a lesion of speech clinically and anatomically distinct from aphasia. It was often associated with amnesic aphasia, motor aphasia, or word blindness. The lesion consisted in a destruction of the first and second left temporal convolutions. The mechanism of word deafness is due to complete abolition of the power of transformation of spoken words into verbal images. Word deafness he considered an indication of great value in locating a lesion of the left temporal lobe.

The second scientific paper of the evening was by Dr. FRANK H. HAMILTON, on

ASIATIC CHOLERA AT SUSPENSION BRIDGE IN 1854, AND ITS LESSONS—WHAT WE KNOW OF CHOLERA.

The author said the present paper was the fulfilment of a promise to the editor of the *Buffalo Medical Journal*, in 1854, sometime to write a paper on the Asiatic cholera as it had prevailed at Suspension Bridge that year. After directing attention to the extreme fatality of the epidemic and its rapid spread among the workmen at Suspension Bridge, the author ascribed the great mortality to the combined effect of elevated temperature, moisture, and recently-upturned alluvial soil. It was at the request of Dr. Rogers that Dr. Hamilton and two other physicians had visited the patients during this epidemic. The following lessons which he had drawn from it were not presented as new, but as being entitled to special notice, in view of the fact that we were liable to have cholera imported into this city at any time. His opinions would be expressed chiefly upon the question of what is the present state of knowledge of the nature, the etiology, the mode of propagation, and the treatment of Asiatic cholera.

First, Dr. Hamilton claimed that we have no positive knowledge of the existence of a specific cholera germ. In 1854, Pacini, an Italian physician, described a germ to the presence of which he ascribed the development of cholera, and recently Koch had discovered the "comma bacillus," which he regarded as the true cholera germ; but after marshalling the facts for and against Koch's hypothesis, and the conflicting observations of others who had investigated the subject, the author stated that, with regard to the theory of Koch, that the comma bacillus was the cause of cholera, he felt justified in the assertion that the claim had not been established.

Even if it were determined that the comma bacillus were always present in cholera, but never in other disease or in health, that of itself would not decide that the bacillus and cholera stood in the relation of cause and effect. Again, the theory was also defective in that it had not been shown that the introduction of this germ into the animal system would produce cholera. The inoculations by Koch himself, practised upon the lower animals, had been barren of results. Again, if it were established that a microbe was the cause of cholera, the question would remain to be answered, Which of the microbes hitherto described, or yet to be discovered, would prove the efficient agent? But it might still remain to be proven, should the experimentalists succeed in producing cholera by the introduction of a fluid containing a germ or germs into the system, whether the efficient agent were the fluid or the germ. It might be the fluid containing the microbe which was the cause of cholera, this fluid having taken on properties which no microscope could detect. The author did not wish to be understood as underestimating the importance of microscopical studies; much useful information had been derived from the microscope in the study of disease, but, so far as the cholera or other epidemic infectious diseases were concerned, microscopists had not taught us any important lessons, either with regard to their cause or their prevention. Germicides kill the microbes when attacked outside of the body, outside of their native soil, but within the body these remedies had no effect upon them. Consequently, patients continued to die of cholera after the discovery of microbes. Moreover, it had not been positively proven that the active agent in the production of the disease resided in the intestines; the symptoms would indicate that it might also exist in the blood.

The cholera germ (using this term in its general signification) might be conveyed from place to place by the clothing or any other textile fabric, by articles of food, or water, or animate or inanimate substance. It might be conveyed a considerable distance by the air, —how far it would be difficult to say; probably much would depend upon the force of the wind and other atmospheric conditions. He had reason to think it could not be thus conveyed farther than a mile or two. The theory of Koch, that the germ only found its way into the system through the mouth and

stomach, was corollary to his theory of causation by the comma bacillus, and that introduction of the virus through the mouth and into the stomach might be one of the means of propagation could be admitted, but that it was the only means the history of epidemics showed not to be true. It was not necessary to assume that because the intestinal secretions were changed, or the mucous membrane congested, the virus was originally implanted in the intestinal canal. The blood and the renal secretion also underwent changes quite as marked as those which took place in the intestinal secretions.

Although the cholera virus were received into the human system, it need not necessarily give rise to cholera. It seemed probable that every person living in a cholera atmosphere received more or less of the virus into the system, but only a small proportion of these persons took sick and died. It was true of all the infectious diseases, that the reception of the virus into the system did not necessarily produce that specific disease. It was also true, however, that a large proportion of those exposed to infectious diseases became infected, whereas only a small proportion of those exposed to cholera took the disease. A suitable soil was necessary. Cholera also differed from other infectious maladies in that one attack did not insure protection against another.

The conditions which protected against cholera were all those which went to prevent disturbance of the alimentary canal; also the avoidance of impure air, overcrowding, bad ventilation, decaying vegetable or animal matter, stagnant water, a warm and moist condition of the atmosphere. The most efficient agent for the propagation of the disease seemed to be the vapors rising from freshly-exposed soil and decaying animal and vegetable matter, together with a warm and moist atmosphere. That filth was not the only efficient cause of the spread of the disease was shown by the fact that during the epidemic at Buffalo those persons living in dirty shanties on a sandy soil by the lake escaped. But there were instances on record which went to show that a favorable condition of the soil and atmosphere alone would not check the spread of the disease if other local conditions sufficiently favored its spread.

The profession had long sought for a specific against Asiatic cholera, but there were really but very few specifics against any diseases, and none had yet been found for infectious diseases. But in the case of scarlet fever, etc., the disease would run a certain course, and we could only seek to conduct the case to a favorable issue; whereas in cholera, if we took it in time, we could often abort it. It was seldom, however, that a patient was saved to whom remedies were not administered until after the period of collapse had arrived. The remedies which had proven most successful were those which had long been known to be most successful in the treatment of diarrhœa, cholera morbus, and analogous affections. The most efficient means prior to the stage of collapse were opium and rest. Dr. Hamilton preferred opium in the solid form to morphine. The patient would be more likely to recover were he removed to a region not favoring the propagation of cholera, and usually it would be found that the disease would not be spread in his new domicile.

It was believed that the cholera was brought to Suspension Bridge by some immigrants, but these people did not, so far as was known, suffer markedly from the disease, either before their arrival at Suspension Bridge or after their departure, which went to prove that the rapid spread and fatality of the affection among the laborers there was due to the condition of the soil and atmosphere. Again, in only a few instances, and in which the topographical conditions were favorable, was the cholera virus carried to and spread in neighboring localities.

Should cholera appear in this city, would it prove as fatal as it had done in Naples and the south of France? Dr. Hamilton answered in the negative, and for the reason that our climate is more favorable, our system of sewerage better, and we had efficient sanitary measures for the prevention of the spread of the disease. He referred to the success attending the efforts of the sanitary commission in stamping out cholera from Blackwell's Island in 1866, and spoke of the efficient work done by Dr. Yale, then one of the house staff.

Dr. L. M. Yale gave some of the circumstances attending the outbreak of cholera on Blackwell's Island in 1866–67, at which time he was interne in one of the institutions. The epidemic was preceded by great heat, by a tendency to diarrhœal affections in the inmates, and it had been the custom to allow the dejections to remain in a tub in the room over night. Removing the unfavorable conditions, the epidemic, which had carried off many of the inmates in the workhouse, was almost immediately and completely checked.

Dr. Francis Delafield thought it would be conceded that cholera was due to some specific virus, and that without that virus cholera would not develop, no matter how favorable the other conditions might be for an outbreak of that disease. As to what was the nature of the specific poison of cholera, after the fashion of the present time to ascribe disease to the presence and development of a germ, cholera had been ascribed by Koch to the comma bacillus. It took time to decide whether a fashion were a good or a bad one. He spoke of the difficulties attending investigations into the bacterial cause of disease, and said that reliance could not be placed on all pretended experiments alike. He should

consider the conditions favoring the development of cholera to be those which also favored diarrhœal affections. He was of opinion that quarantine would not prove an effectual barrier to the spread of cholera.

Dr. A. L. Loomis was of the impression that the specific poison of cholera, like that of typhoid fever, must undergo changes after leaving the human system before it would become able to impart cholera to the healthy person. He did not believe that cholera could be developed spontaneously, but that its native place was Bengal, from where all epidemics in different parts of the world could trace their origin. The poison could find admission to the human system by the mucous membrane of either the upper or lower portion of the alimentary tract. It had not been shown that the active specific poison existed only in the secretions from the intestines.

Dr. John C. Peters showed maps illustrating the spread of cholera from India, and also stated that the efficacy of quarantine had been shown in Denmark, where, so long as quarantine was enforced, cholera had never entered. Greece had also found quarantine effectual against the importation of the poison.

REVIEWS AND BOOK NOTICES.

The Brain and the Nerves: their Ailments and their Exhaustion. By Thomas Stretch Dowse, M.D. New York, G. P. Putnam's Sons, 1884.

Under this title Dr. Dowse has given to the world one hundred and fifty printed pages, constituting a very readable book, as also one very well worthy of being read; one from which the medical practitioner can gather grain of value, provided said medical practitioner has wit enough to know good grain from bad. The title of the book is misleading, as it is not upon nervous ailments in general, but simply upon nervous exhaustion, a condition again in most cases misnamed, since exhaustion and debility are two different things, and usually it is nervous debility rather than exhaustion which the practitioner is called to meet.

Of all specialties, that of the nerve-exhaustionist seems to lead to the most reckless and dogmatic statement of untruths or disputed truths; probably because there has been so much fog about the subject that those who study it see things distorted and do not recognize that they are enshrouded by it. In the lack of light, they have cultivated most highly their imaginative faculty, accustomed by habit to the mist. Our writer is no exception to this habitual enfogment.

Thus, he bases his work upon the following with other propositions (the italics are his own): "*That man is the highest type of the combination and correlation of all known and unknown forces.*" (If a force is unknown, how can it be known that it enters into a combination which is unknown?) "*That we call this force nervous or vital force,*"—which is simple nonsense; for how can man, to whom "*this force*" evidently refers, be vital force, or how can a combination and a correlation be force?

Again, "That nervous exhaustion is the forerunner and prime agent in the production of all diseases, functional and organic,"—a proposition which we think most of our readers will consider well adapted to excite laughter.

On page 15 we are told "positively that it is *proved* that chloral excites a toning influence upon the arterial web." On page 121, that "it (chloral) has the effect of lowering the tonus of the body and of breaking up the red blood-corpuscles;" that it is also "prejudicial to blood-oxidation and lymph corpuscular assimilation,"—dogmatic assertions, partly true but largely false, worthy to be enframed and set as up frightful examples to young medical writers in the same way as the drunkard adorns the labor of the temperance orator. If our author in his next edition would control this his almost hysterical tendency to literary positivism, and not say "nervous exhaustion is *invariably* associated with rapid breathing," when he means or ought to mean is frequently associated, and would avoid all exaggeration, he would make his book more trustworthy, although perhaps less amusing.

Transactions of the American Gynæcological Society. Vol. VIII., for the Year 1883. New York, D. Appleton & Co., 1884. 8vo, pp. 276.

Owing to an oversight, we neglected to notice the appearance of this handsome volume of Transactions at the time it was published. The report of the meeting held at Philadelphia, which appeared in our columns at the time, will serve as an index to the present issue, which contains thirteen essays upon practical topics connected with gynæcic surgery, and two biographical memoirs, besides the usual lists of officers and members, minutes of meeting, and index. The Society is to be congratulated upon the handsome form in which the proceedings are issued, and the editor, Dr. Foster, deserves especial credit for the more prompt appearance of this than had heretofore been the practice with former volumes.

Post-Nasal Catarrh and Diseases of the Nose causing Deafness. By Edward Woakes, M.D. Illustrated. Philadelphia, P. Blakiston & Co., 1884. 8vo, pp. 224.

This is the third edition of Woakes's unpretentious little work, which was received with such favor by the profession. Although lim-

ited in its topics selected for discussion to a department of disease which is considered subsidiary to the special domain of the aural surgeon, its subjects are by no means unimportant; and we may be pardoned the statement that it has been principally through the activity of American writers and workers that their proper relations and significance have become recognized. The present work is especially concerned with the author's methods of treatment, which in some instances differ from our own, whether for the better or worse experience will rapidly determine. The chapters devoted to the Pre-Catarrhal State and Taking Cold are of special interest as an indication of the tendency which now exists towards preventive medicine. Whether the treatment be followed or not, no one can read the work without being interested and benefited by it.

GLEANINGS FROM EXCHANGES.

Vogt's Method of Resection of the Astragalus.—An anterior cutaneous incision is made from the tibio-tarsal articular line on the external border of the extensor communis, and directed longitudinally on the tibio-tarsal articulation and dorsum of the foot to Chopart's articulation. The subcutaneous cellular tissue, aponeurosis, and annular ligament are divided, the tendons of the extensor longus digitorum are separated carefully from the subjacent tissues and held firmly to one side, the extensor brevis digitorum is incised and drawn to one side upon the external lip of the wound, the external malleolar artery, and the accompanying veins, are divided between two ligatures.

The articular capsule being incised longitudinally as far as possible, the insertions of the capsule and its ligaments are detached on each side by the raspatorium, the head and neck of the astragalus are denuded, the astragalo-scaphoidean ligaments are divided transversely, so as to disengage the anterior part of the astragalus. Now an incision is made from the middle of the anterior longitudinal incision, which is laterally transverse, and in the adult about ten centimetres long, terminating under the point of the external malleolus, and the soft parts are gradually divided down to the astragalus without interfering with the peroneal tendons.

The foot being forcibly supinated, the peroneo-calcanean ligaments are divided close to the malleolus, and a sharp-pointed bistoury cuts the ligamentous attachment of the sinus of the tarsus, using also, if necessary, a delicate pair of scissors.

The astragalus is brought forward in rotating outward the supinated foot, by seizing the neck of the astragalus with a davier, or by the aid of an elevator placed beneath the bone. A fine pair of scissors introduced between the internal malleolus and the astragalus cuts the large insertion of the internal lateral ligament to the astragalus; a new traction, effected by pressure, carries the astragalus so forcibly outward that its last attachments to the calcaneum at the posterior astragalo-calcanean articulation can be easily divided.

After the ablation of the astragalus, the whole of the articular cavity is exposed, the synovial membranes can be extirpated, and it is easy to remove all parts of the tibia and calcaneum that may be suspicious. After drainage and suture, the superior surface of the calcaneum adapts itself so exactly to the malleolar surfaces as to leave no cavity.—*Journal of the American Medical Association.*

Oil of Gaultheria in Rheumatism.—In the *New York Medical Journal* for November 8 appears an article entitled a New Specific for Rheumatism, in which Dr. H. H. Seelye reports the results obtained from oil of gaultheria given in one hundred and eighteen cases of acute articular rheumatism. It can be administered in capsules, alone or with salicylate of sodium, or in soda-water, but the preferred method was in an emulsion in glycerin and water. From ten to twenty minims were given every two hours during the day, and at intervals of three hours during the night. All forms of rheumatic pain seemed remarkably influenced, but its effect was most marked in acute inflammatory cases. The tendency to cardiac complications seemed not to be increased. The success was so gratifying that further trial of the remedy was strongly urged.

MISCELLANY.

Munificent Gift to the German Hospital.—On the 16th instant the new wing of the German Hospital of this city was opened with appropriate ceremonies, in the presence of a large number of distinguished visitors, in the chapel of the new three-story building, which adjoins the old, extending to the south.

Addresses were made by Mr. Lankenau, President of the Board, who formally turned over the building to the Trustees, the donation being acknowledged by Col. M. Richards Muckle, after which other addresses were made, and the company proceeded to inspect the improvements.

Over the entire old portions of the main building a mansard story had also been erected, and above the extreme western part an entresol has been constructed for storage purposes. Over this is a story fourteen feet high in the clear, containing seven rooms. The old, dark staircase has been opened up to the roof, where a ventilating skylight has been placed, giving a cheerful aspect to the stairs and corridors. The new mansard story

over the eastern portion of the building is seventeen feet high, divided into thirteen apartments. One of these, facing the south, is the Convalescent Ward, twenty by forty feet, opening into a sunny veranda forming a solarium in winter. From this room a fine south view of the city is afforded. The eastern staircase in this portion of the building was also carried up with roof skylight.

Set in the roof or loft are three iron tanks, each sixteen feet long, eight feet wide, and four feet deep, holding in the aggregate nine thousand gallons of water. Besides abundant fire-connections, the hospital is supplied with seventy-two fire-buckets and three Climax chemical fire-extinguishers.

The basement story of the main building has also been materially improved, the kitchen having been enlarged and a new cooking-range, fourteen feet long, placed in it, together with a number of steam-tables.

Running south, at right angles with the old portion, situated at the southwestern corner of the main building, is the new wing, one hundred and twelve feet long and thirty-three feet wide. This extension is surrounded by an area twelve feet in width, giving light and air to the basement, which is five feet below the surface and five feet above it. The walls of the area are built with massive mason-work of Stockton stone, laid in regular range-work, coped with dressed granite, and surmounted by a neat, open wrought-iron railing, the pavement being laid with North River flagstone. The basement is ten feet in the clear, with central corridor, having rubbed flagstone floor, with pipe ducts in the centre. Upon each side of this passage are located apartments for the domestics, some twelve rooms in all.

Above the basement are the three upper stories, each fourteen feet ten inches high, and the mansard story, thirteen feet six inches in height.

At the intersection of the corridors of the several stories of the old and new buildings are the baths and water-closets, all arranged in the most convenient and complete manner. The floors are laid with slate upon brick arches, the plumbing-work being executed with the best materials in a substantial manner, the pipe being exposed in most cases.

The main grand staircase, sixteen by thirty-six feet in size upon the plan, divides the old and new buildings. This portion of the structure it was thought advisable to construct fireproof. The materials employed therein are therefore iron beams with brick arches. The "horses" and framings of the stairs and platforms were built with iron beams, slate risers, steps, platforms, and flooring, and the soffits and ceilings are plastered upon wire mesherwork. All the balusters, hand-railing, newel-posts, and wainscoting are finished in white oak with ash burl panels.

This portion of the building is surmounted by the cupola, having a square base at the roof of twenty-six feet, with hold balustrading and pedestals and arms at the four corners. From this base the cupola proper starts. It is octagonal in form, and finished in the full order of the Ionic style of architecture, having on each of the eight corners a column, with its entablature and blocking courses, terminating with a domed roof and finial, with golden vane and the cardinal points, the top of which stands two hundred and fifty feet above tide-water level. From this balustrade floor is afforded a magnificent view of the entire city.

On the first, second, and third floors of this new wing are wards thirty by eighty-six feet, each having accommodations for sixteen beds. On each of these floors are two anterooms for nurses, kitchens or sewing-rooms, and entrances to the passenger elevator. The first and second floors have bay-windows on the southeast, with seats as rests for the sick. There are large ventilating-rooms at each corner of the wards, those on the north side having steam jets in them. Open grates are set in the south corners. Each ward has ventilating registers, each fourteen by eighteen inches, arranged for top and bottom draughts. For summer use, gas-folding brackets swing into flues in the walls, and are encased in projecting bent-glass screens to keep the heat from the room, while the lower portion is open to draw off the impure air into the flue. This arrangement not only frees the room from the heat of the jets, but the flame acts as a ventilating agent, the heat creating the current of the draught.

There are seven large windows in each of the east and west walls, having double sashes to equalize the external temperature. The transom sashes of these windows are filled with stained glass, with figures of water-plants and other objects neatly designed.

All the steam radiators in the wards are supplied with fresh air from the external atmosphere by open cast-iron flues, walled in, having open gratings in the external walls, and cast-iron pivot doors to close off the draught at pleasure inside. These flues supply the lower portion of the radiator, in place of being set at the top.

The wood-work is of ash, with hard shellac finish, and the washboarding was done with cement.

The operating-room and clinical amphitheatre is situated upon the west of the new south wing, and is entered internally from the main staircase, and externally upon a neat iron stairway. This room is a full circle, the floor being twenty-six feet in diameter. The centre and eastern half is occupied by the operating-space proper. Ample light is afforded by the skylight in the dome or ceiling and one of the Siemens regenerative gas-burners, which consumes fifty cubic feet of gas per hour and gives a light of five hundred

candle-power, and is useful in improving the ventilation. There are also ample side-lights. The floor is laid with encaustic tile, and the walls up to the spring of the cornice are lined with light glazed tiles having an ornamental border. The seating is in ash, with capacity for sixty persons. Attached to this room on the east is a private apartment for the use of the medical staff.

All the buildings are constructed of strong, durable Yardleyville sandstone, laid in range-work, drafted and tool-pointed with cement. It has a warm tone of color, pleasing to the eye. The interior of the walls is faced with hard brick, allowing an open space of two inches to keep the inside dry and to break the external heat, while the roof is triple-pitched and covered with Peach Bottom slate; the top or upper deck has a line of ventilating openings in the cornice-mouldings for drawing off the heat of the lofts. This arrangement has been employed in all of the roofing of the old and new buildings. The dome of the operating theatre is covered with a galvanized iron-pointed pattern of shingling. With the exception of the main wing building, where most of the cornice-work is executed in stone, the cornices of the entire buildings are of galvanized iron.

The fire-escape is on the southwest corner of the new wing building, easy of access. It extends through the several floors, and is constructed of cast and galvanized iron.

The improvements, including the new buildings for the hospital proper, the boiler-house, laundry, etc., and for the Mary J. Drexel home and the grounds, represent a total valuation of more than six hundred thousand dollars, the free gift of Mr. John D. Lankenau, the President of the Board of Trustees.

THE HYDROCHLORATE OF COCAINE has raised quite a furore. Abundant experience has already demonstrated its value as a local anæsthetic in eye-surgery, and it has also been used successfully injected into the skin to facilitate removal of small tumors.

THE first volume of the "American System of Practical Medicine," edited by Prof. Wm. Pepper, it is announced, will be ready for subscribers February 1, 1885.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 9, 1884, *TO NOVEMBER* 22, 1884.

MCKEE, JAMES C., MAJOR AND SURGEON.—Leave of absence extended one month. S. O. 273, A. G. O., November 20, 1884.

BYRNE, C. C., MAJOR AND SURGEON.—Granted four months' leave of absence from November 16, 1884. S. O. 265, A. G. O., November 11, 1884.

GODDARD, C. E., MAJOR AND SURGEON.—Assigned to duty at Fort Yates, Dakota Territory. S. O. 138, Department of Dakota, November 15, 1884.

TREMAINE, W. S., MAJOR AND SURGEON.—Granted leave of absence for one month, on surgeon's certificate of disability. S. O. 233, Department of the East, November 12, 1884.

WILSON, WILLIAM J., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months, with permission to go beyond sea, to take effect when his services can be spared by his department commander. S. O. 262, A. G. O., November 7, 1884.

COWDREY, S. G., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 237, Department of the East, November 17, 1884.

HAVARD, VALERY, CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for four months, permission to go beyond sea, to take effect when his services can be dispensed with at his present station. S. O. 268, A. G. O., November 14, 1884.

SHUFELDT, R. W., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post surgeon, Fort Wingate, New Mexico. S. O. 217, Department of Missouri, November 4, 1884.

TAYLOR, A. W., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Omaha, Nebraska, and ordered for duty at Fort D. A. Russell, Wyoming Territory. S. O. 101, Department of the Platte, November 19, 1884.

OWEN, WILLIAM O., JR., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Canby, Washington Territory, and ordered to Fort Spokane, Washington Territory, for duty. S. O. 169, Department of the Columbia, November 4, 1884.

PHILLIPS, JOHN L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Keogh, Montana Territory. S. O. 134, Department of Dakota, November 5, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM NOVEMBER 9, 1884, *TO NOVEMBER* 22, 1884.

GROVE S. BEARDSLEY, promoted to the grade of medical inspector, April 24, 1884, November 14, 1884.

P. A. Surgeon A. C. HEFFENGER, duty at Portsmouth, New Hampshire, continued till December 12, 1885, November 11, 1884.

Assistant-Surgeon F. W. F. WIEBER, to the Receiving-Ship "Vermont," at New York, November 12, 1884.

P. A. Surgeon HOWARD E. AMES, detached from the Greely Relief Steamer "Bear," and assigned to special duty in New York, November 17, 1884.

Surgeon GEORGE A. BRIGHT, detached from the "Galena," and placed on waiting orders, November 19, 1884.

Medical Inspector C. J. CLEBORNE, to duty at Philadelphia, Pennsylvania, as member of medical examining boards, November 21, 1884.

Surgeon F. L. DU BOIS, when detached from the Naval Examining Board, November 29, is ordered to the "Galena," November 20, 1884.

P. A. Surgeon EDWARD H. GREEN, detached from the Greely-Relief Steamer "Thetis," and assigned to special duty in New York, November 17, 1884.

Surgeon J. H. HALL, detached from Navy-Yard, Mare Island, and assigned to duty at the naval hospital at that yard, November 19, 1884.

Surgeon JOSEPH HUGG, to the "Minnesota," as relief of Surgeon Woolverton, November 15, 1884.

Assistant-Surgeon WILLIAM MARTIN, to special duty in connection with the New Orleans Exposition, November 19, 1884.

P. A. Surgeon F. S. NASH, detached from the Greely-Relief Steamer "Alert," and assigned to special duty in New York, November 17, 1884.

Surgeon W. J. SIMON, to the Philadelphia Hospital for treatment, November 17, 1884.

Surgeon T. WOOLVERTON, detached from the "Galena," and placed on waiting orders for sea-service, November 15, 1884.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, DECEMBER 13, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON BLEPHARITIS MARGINALIS,—INFLAMMATION OF THE MARGIN OF THE EYELIDS.

Delivered at the New York Eye and Ear Infirmary

BY W. F. MITTENDORF, M.D.

GENTLEMEN,—Among all affections of the eyes, those of the lids, and especially those affecting their free margin, are the ones most frequently met with. This is due, to a great extent, to the exposed position of the lids, and to the large number of glands which are found, especially along their free edge.

Such diseases are not only of frequent occurrence, but will also prove, at times, extremely obstinate to treatment; they are a source of great annoyance to the patient, on account of the unsightly deformity accompanying them. Their treatment will therefore be a matter of great importance not only to the specialist, but also to the general practitioner.

You will remember that, surrounding the eyelashes, the free edge of the lids is studded with small sebaceous glands, the function of which is to keep the margins greased, in order to prevent the tear-fluid from flowing over the cheek. These glands have been named after the celebrated Vienna anatomist, Zeiss, and have been called Zeiss's or tarsal glands. An inflammation of them is called blepharadenitis. After a while the inflammatory process must extend to the connective tissue of the lid, and then we have blepharitis marginalis. Another name of the affection is ophthalmia tarsi. But you will readily understand that by this name is meant an inflammation of the entire lid, whereas blepharadenitis indicates an inflammation of a particular portion of the lid. You will very frequently have patients coming to you who have suffered from diseases of this kind not only for months, but even for years. During that time they had been constantly annoyed by the red appearance of the lids, and by the inconvenience of having the eyelashes always glued together and the tears flowing over the cheeks.

Blepharadenitis is, according to the extent to which the lid participates in the inflammation, to be divided into different classes. The common form is characterized by the appearance of small crusts on the free edge of the lid, surrounding the eyelashes. After removing these crusts, we generally find that the underlying skin is red, looks inflamed. During the night the evaporation of the exudation of these inflamed glands glues the lids together, and the patient is unable to open the eyes in the morning. During the day the eyelashes are matted together, and present an unsightly deformity. This is known as *simple blepharadenitis*.

If the process be allowed to go on, the surrounding tissue is apt to break down, and you have the disease complicated with small ulcerations in different parts of the margin of the lids. Removing the crusts which have formed over the parts, you will find that there is a depressed ulcer underneath, which bleeds easily as soon as the crust is removed. This is the *ulcerative form*.

If this kind of blepharadenitis be not promptly treated, the ulcerative process will extend over the entire free margin of the lid, and as a result we shall have cicatricial changes, which produce great deformity by altering the appearance of the entire free margins. This is known as *lippitudo*, popularly called *blear-eye*.

If the skin do not break down, and the infiltration extend to the deeper parts of the free edge of the lid, it will result in hypertrophy, which in some cases exists to a remarkable degree, there being quite a thick elevation along the entire free margin of the lid. This variety is known as *tylosis*.

There is one other form of blepharadenitis, which is not so marked in its appearances, but which often proves to be extremely obstinate. It is apt to occur in persons with a very delicate skin, especially persons with red hair, because they, as a rule, have a very fine skin, and at the free edge of the lid especially so. The least irritation, sometimes even the atmosphere of the room, or slight straining of the eye from work near by, will in these cases produce fine, little scales on the lids: hence this form of the disease has been given the name *squamous blepharadenitis*. In this form we never have ulcerations of

the lids. The principal features are redness and fine, little, flake-like deposits on the free edge of the lids. This form of blepharadenitis is principally found, too, in eyes which have an error of refraction, especially in hypermetropic eyes, or those that are afflicted with astigmatism. In these cases great accommodative efforts have to be made, which lead to hyperæmia of the free edge of the lids and subsequent irritation of the glands, and, as a result, we get this redness and, as a result of the changed secretion, fine scales.

Blepharadenitis in its simpler form is frequently associated with eczematous conditions, and, if the trouble extend from the edge of the lid to the integument we speak of, eczema of the lid. In these cases you will frequently find eczematous patches behind the ear or on other parts of the body. You cannot expect to cure this form of blepharadenitis by local applications; you will have to resort to internal medication besides. But, as a rule, blepharadenitis is due to local causes. In children the lid-trouble is frequently due to phlyctenular conjunctivitis. In this disease there is, accompanying the inflammatory process, an abundant secretion of sharp, acrid tears, which, as they pass over the free border of the lid, cause an inflammation of the glandular tissue, and sometimes, if they reach the cheek, they cause an excoriation of the integument. This condition is very apt to be found in strumous or scrofulous children.

Another milder form is apt to accompany simple conjunctivitis: it will, as a rule, disappear as soon as the exciting cause is removed.

Treatment.—With regard to the treatment of these affections, it must differ according to the cause and nature of the disease. You will readily understand that the first indication for treatment is the removal of the crusts. If you fail to do this, all your local applications can have little or no effect, because they do not reach the seat of the disease at all. This should be done very carefully, after softening them by the use of warm water or olive oil.

In simple blepharadenitis one of the best remedies at our disposal is liquor plumbi subacetatis, which should be used in the following way:

℞ Liq. plumbi subac., f℥j.

Sig.—Six drops to half a tumbler of water. Use as an eye-lotion five or six times a day for four or five minutes at a time.

If you use the lotion stronger than here indicated, it will produce a peculiar, dry sensation of the free edge of the lid, due to the powerful astringent effect of the sugar of lead. This remedy will in a short time remove the unpleasant redness of the lid entirely.

During the night, in order to prevent the gluing together of the lids, as well as to protect the inflamed parts, a very mild preparation of the red oxide of mercury is indicated. The following prescription, which is known as *Pagenstecher's ointment*, will act very nicely:

℞ Hydrarg. oxid. rubri, gr. j;
Vaseline, ℥j.
Fiat unguent.
Sig.—Apply before retiring.

In order to get the full effect of this medicine, it is necessary that the lid be thoroughly cleaned and dried before it is applied. To effect this object, the eye may be washed with

℞ Sodii bicarbon., ℥j;
Aq. camphoræ, f℥viij. M.
Sig.—Use at night.

Having removed all the crusts and washed the free edge of the lid with this solution, the oxide ointment may be applied. The greatest care should be exercised in preparing the oxide of mercury ointment. The druggist should triturate the red oxide with a few drops of the oil of sweet almonds, so as to reduce it to a very fine powder, and then add the vaseline and mix well together. The difficulty of preparing this ointment properly has led us to substitute for the red oxide the yellow oxide of mercury, which is a very fine powder and can be mixed readily with simple cerate or with vaseline. The proportion may be made a little stronger when the yellow oxide is used, because it is not quite so powerful in its action.

℞ Hydrarg. oxid. flavi, gr. iss;
Ung. simpl., ℥j. M.
Fiat unguent.
Sig.—Apply to the edge of the lid before retiring.

An inflammation of the lids of this kind will frequently extend to the conjunctiva, not only from direct extension of the inflammatory action, but also from the fact that the crusts which form on the free edge of the lid fall into the conjunctival sac and act there as foreign bodies.

In this case it is necessary to use a preparation which can be applied in the conjunctival sac as well, and the following prescription has been of the greatest use to me:

℞ Sodii biborat., gr. xx;
Mucilag. cydon.,
Aq. laurocerasi, āā f℥ss;
Aq. camphoræ, q. s. ad f℥iij. M.

Sig.—Use as an eye-lotion three times a day.

This should not only be applied to the free edge of the lid, but some of it should be allowed to enter the conjunctival sac as well.

The action of the cherry-laurel water is that of a mild anodyne, of the mucilage of quince-seeds soothing, of the camphor-water slightly stimulating, while the biborate of soda is astringent.

If the inflammatory process have extended to the integument of the lid, if we have the condition which may justly be termed eczema of the lid (in children arising from scratching the eyelids constantly), it is well to use a preparation which contains morphine or some anodyne, and in this case we can use a stronger preparation of mercury:

℞ Hydrarg. oxid. rubri, gr. v;
Morph. sulph., gr. iss;
Unguent. simpl., ℥ss. M.

Fiat unguent.

Sig.—Apply, after removing the scab and drying the parts carefully, to the excoriated parts.

In the summer, as a rule, I use simple cerate, because vaseline is too soft and will allow the red oxide to precipitate to the bottom of the jar. During the winter the vaseline may be substituted for the simple cerate, as it is softer and more easily applied, and yet not too soft.

That form of blepharadenitis which is associated with ulcerations of the free edge of the lid should be treated in the same manner, but the ulcerated parts should, in addition, be touched once a day with a solid stick of nitrate of silver. In doing this, much care must be exercised only to touch the ulcerations very gently, for, if the nitrate enters the eye, it will prove extremely painful. Applying this every day will, as a rule, lead to a perfect and rapid cure of this otherwise very tedious and troublesome disease.

There is one form of blepharadenitis which we cannot expect to cure entirely, —namely, that in which the free edge of the lid is completely altered. In these cases you can only expect to relieve the trouble partially, allay active inflammation, without, of course, being able to change the cicatricial conditions, and for this purpose I use a salve which is to be applied at night:

℞ Hydrarg. oxid. rubri, gr. ii;
Liq. plumbi subac., gtt. x;
Vaseline, ℥ii. M.

Fiat unguent.

Sig.—Apply before going to bed.

During the day such patients ought to use a solution of alum and camphorated water:

℞ Alum., gr. x;
Aq. laurocerasi, f℥ss;
Aq. camphoræ, f℥j. M.

Sig.—Use as an eye-lotion three times a day.

One word with regard to the hygienic management of patients suffering from blepharadenitis and eczema of the lids. Such patients should not be kept in badly-ventilated rooms. Their bedrooms especially should be light and have good ventilation. They ought to have as much out-door exercise as possible, and their general condition ought to be faithfully attended to. You will find in most of these cases that their diet has been sadly neglected by the parents. You should insist that the child have only three meals a day, nothing whatever between meals. Sweets and pastry, such as pies, etc., ought not to be allowed. The child ought not even to have bread or crackers between meals. The following mixture, which varies a little from the officinal, may be given with advantage:

℞ Sodii bicarb., ℥ij;
Fl. ext. rhei, f℥ij;
Ess. menth. pip.,
Ess. zingib., āā f℥j;
Aquæ ad f℥iv. M.

Sig.—For a child, a teaspoonful three times a day; for an adult, a tablespoonful three times a day, half an hour before meals, diluted in sufficient water to make it pleasant to take.

There is another form of blepharadenitis, accompanied by thickening of the free edge of the lid. This thickening can be best relieved by the following application:

℞ Ungt. hydrarg. nitr., ℥ss;
Ungt. simpl., ℥iij. M.

Fiat unguent.

Sig.—Apply morning and evening.

I have spoken also of another—the squamous—form of blepharadenitis. Here it is absolutely necessary to correct any error of refraction which may exist. The adjustment of glasses for such patients is fully as important as any local remedies which you may resort to. You will find that cases of this kind, in which the disease has existed perhaps for years, will rapidly improve after proper glasses shall have been prescribed. I have also found of great value in these cases a stimulating lotion composed as follows:

℞ Spir. vini gallici,
Spir. lavand. simpl., āā f℥ss;
Spir. rosmar. simpl., f℥iij. M.

Sig.—Apply to the lids morning and evening.

Do not forget to tell the patient that when applying this lotion to the lids the eye should be tightly closed. If, however, any of it should get into the eye, it will cause considerable smarting; but it will do no harm. If you will tell your patient to allow a few drops to evaporate from the palms of the hands, holding the hands up to the eyes, opening and closing the eyelids so as to allow the vapors to come in contact with the free edge of the lids very thoroughly, it will produce a better effect.

In those cases of inflammation of the free edge of the lid where there is a certain amount of redness remaining, all active inflammatory process, however, having subsided, a preparation of the following kind will have a good effect:

℞ Ol. cadini, gtt. v;
Ungt. simpl., ℥j. M.
Fiat unguent.

Sig.—Apply at night.

All these ointments should be used at night. If it be applied to the free edge of the lid during the day, some of the grease is very apt to get into the eye and produce slight disturbance of vision. The ointment should therefore be cleaned off the lid the next morning by washing with water containing a little bicarbonate of soda or Castile soap.

You will occasionally meet with very chronic cases of eczema of the lid, and in these cases it may be necessary, especially in adults, to give arsenic. For this purpose you may employ either Pearson's or Fowler's solution. If you do not wish to tell your patient to use simply so many drops of Fowler's solution, a very nice vehicle will be found in syrup of ginger:

℞ Liq. potassii arsen., f℥iss;
Syrupi zingiber., f℥iij. M.

Sig.—One teaspoonful three times a day after meals. For children the amount of arsenic should be diminished, one minim three times a day being sufficient.

It is hardly necessary to tell you, gentlemen, that in children of a scrofulous constitution you should give cod-liver oil combined with the iodide of iron:

℞ Syr. ferri iodidi, f℥ss;
Ol. morrhuæ, f℥iv;
Syr. zingiber., f℥ij. M.

Sig.—A half to one teaspoonful three times a day.

If this be well shaken, the cod-liver oil will be found to be very much disguised by the ginger syrup.

Where there is much of an eczematous condition, with an abundant formation of yellow crusts, I have found calcined magnesia with rhubarb of great service:

℞ Magn. cal. pond., ℥iss;
Fl. ext. rhei, f℥ii;
Ess. zingib., f℥ss;
Aq. anisi, f℥iv. M.

Sig.—One drachm three times a day before meals.

Some cases of blepharadenitis are due to traumatism, but usually in these cases the injury to the lid is comparatively insignificant, the injury to the eye being, as a rule, of greater importance. Among injuries of the lids are burns, and these are treated with great advantage with a weak solution of creasote:

℞ Creasoti, gtt. v;
Aquæ, f℥iv. M.

Sig.—Apply to the eyelid.

If the burn affect the eyeball as well as the free edge of the lid, it will be necessary to prevent adhesion of the edge of the lid to the eyeball (symblepharon). The use of a preparation which contains a very thick oil—such, for instance, as castor oil—is of special service.

In most cases the cornea is also affected, and for this reason I combine castor oil with atropine. As it is necessary to have the oil in its purity, not mixed with water, the solution should be prepared in the following manner:

℞ Atropinæ puræ, gr. ij;
Ol. ricini, f℥j. M.

Sig.—Apply one drop to the eye every hour.

The druggist should not dissolve the atropine in a few drops of water and then mix with the oil, because in this case the effect of the oil would not be as great as if it were free from water. The atropine should be dissolved in a few drops of alcohol, and then mixed with the oil, and then the whole slightly warmed so as to have all the alcohol evaporated. In that case you get a perfectly clear solution of the atropia in the castor oil. If this be applied, say one drop every fifteen minutes or half-hour, not only will the burn of the free edge of the lid be speedily relieved, but the formation of symblepharon will also be prevented.

One of the sequelæ of blepharadenitis is extension of the process to the hair-follicle and subsequent loss of the eyelashes. This occurs sometimes quite early in the disease, and at other times it is only towards the latter stage of the affection that the eyelashes begin to fall out. As long as only a limited number are lost, it is not a serious affection; but if it occur later on, as a result of cicatrization of the free edge of the lid, all the hair-bulbs may be destroyed, and the deformity, known as *madarosis*, will be very great. It is therefore important to attack the inflammation at the edge of the lid as early as possible. The very fact that we are using for the treatment of the disease the oxide of mercury will cause stimulation of the parts and prevent loss of the eyelashes, to a certain extent. After the disease has been relieved, and the eyelashes do not grow rapidly, the stimulating lotion of lavender and rosemary which I have mentioned will act very beneficially. In fact, the use of this after the disease has been relieved will be of great service in preventing a relapse of the trouble, not only because of its stimulating action, but because it dissolves the grease which might possibly be stopping up the mouths of the glands and thus causing irritation.

I was speaking of blepharadenitis due to errors of refraction. This is really of more frequent occurrence than we formerly had any idea of. The credit for calling attention to this fact is principally due to Dr. St. John B. Roosa. During the Ophthalmological Congress which was held in this city, he read an elaborate paper on this subject, showing by numerous cases the relation between errors of refraction and obstinate blepharadenitis. At this time it was doubted very much by our English confrères, but at present the cause is universally accepted. It is, however, unfortunate that only very few of the text-books mention it. Of course it is always comparatively easy to recognize this cause, but it is not always so easy to remove it. The patients are not always willing to wear glasses; it may interfere with their business, or it may be that they cannot pay for the cylindrical glasses which are necessary for the correction of these eye-troubles. In such cases I have recently used, in conjunction with the other remedies mentioned, a weak solution of atropine, dropped into the eye morning and evening:

℞ Atrop. sulph., gr. j;
Acidi borici, gr. x;
Aquæ, f℥j. M.

Sig.—One drop into the eye morning and evening.

I have been led to the adoption of this plan of treatment by the fact that patients who had been suffering from blepharadenitis for a long time, error of refraction being the principal cause, and being placed under the influence of atropine in order to make out the error of refraction, would get entirely well of the blepharadenitis within a few days. Of course it is evident to you how this remedy acts: it paralyzes the power of accommodation; it does away with all straining of the eye fully as effectually as correcting glasses would do. In a great many cases, if the disease be cured once, and the patients are a little careful with regard to the use of their eyes, no relapse will occur, even if they do not wear glasses for the correction of the error in refraction which exists.

PARALDEHYDE MIXTURE.—In order to overcome the rather disagreeable taste of paraldehyde, many corrigents have been suggested. Sutter recommends the following:

Paraldehyde, 10;
Rum (Jamaica), 15 to 20;
Spts. limonis (recent), 1;
Syrupus, 30;
Aqua, 139 to 144. M.

Dose is 100 gm., or a small wineglassful.

Ivon gives this formula:

Paraldehyde, 10;
Alcohol at 90°, 40;
Tr. vanilla, 2;
Aqua, 30;
Syr. simplex, 60. M.

Dose, f℥j to f℥ij.

ORIGINAL COMMUNICATIONS.

SOME COMPARATIVE RESULTS OF TREATMENT IN CHRONIC OSTITIS OF THE HIP.

BY V. P. GIBNEY, A.M., M.D.,

New York.

Read before the American Academy of Medicine at its Annual Meeting, Baltimore, Maryland, October 29, 1884.

TOWARDS the close of the present summer there came under my observation two cases of convalescent ostitis of the hip, which strengthened my conviction that there was much more to be expected from a patient management of these cases based upon a rational pathology than from the employment of any special splint, however highly recommended. And when I was invited so courteously to contribute something to this meeting, I gladly availed myself of the opportunity of talking to a body of men who are not carried away by sentiment and an uneducated enthusiasm, but who come to the study of a subject with a scientific habit,—men who by their very educational training demand facts, and arguments constructed thereupon, for conviction.

These two cases, I say, are to furnish me a theme for the present occasion, and with this theme I propose to illustrate by clinical memoranda some of the results men obtain in every-day life.

Let me premise, however, the statement that what we call "hip-disease," "hip-joint disease," "morbus coxarius," "coxalgia," etc., I prefer to call, for reasons both pathological and therapeutical, *chronic ostitis of the hip*, or *chronic articular ostitis of the hip*. The former perhaps expresses quite as forcibly as does the latter the idea I want my hearers and my readers to entertain of the disease now presented for discussion. The time has already come when a diagnosis can be made of early primary bone-disease, and with the symptoms and the signs of the same it is not my purpose on the present occasion to deal.

Let me preface further my remarks, in order to give a clearer understanding of the subject, with a list of the various therapeutical measures in vogue.

I.—THE EXPECTANT METHOD.

I have not qualified the term "expectant," strong though the temptation be, by a "so-called," or "as it is commonly understood," for the reason that I desire to let the method go by the name its advocates prefer. What we understand by the expectant treatment is a treatment that consists of (*a*) a good hygiene, coupled with the internal administration of drugs supposed to arrest or to change a constitutional vice, known as a diathesis, either hereditary or acquired, commonly called struma or scrofula; (*b*) counter-irritation by means of issues, the cautery, or vesicants more or less severe; (*c*) liniments and the roller in the shape of a spica bandage, compresses of cotton batting often being placed over areas of fulness; (*d*) the non-interference with abscesses until acumination takes place, and then the making of a simple punctured wound through an abnormally thin integument; (*e*) the complete rejection of apparatus of any kind to prevent or correct deformity until one can feel satisfied that the morbid process is arrested; (*f*) intermittent force of an elastic nature, the object of which is to correct deformity that has become fully established.

A long residence in a hospital unalterably committed to this treatment enables me to define thus minutely the method known as expectant. I am pretty sure that I do not convey an erroneous impression.

What I have elsewhere defined as the expectant treatment carried to its legitimate issue differs materially from the present definition.

What then are we to expect in a given case subjected to this plan? Scientifically, what can we expect from a course of treatment which ignores all contrivances for the prevention of deformity?

Even the stanchest advocates of the expectant treatment in ostitis of the hip inconsistently employ apparatus for the prevention and correction of deformity when other joints of far less importance than the hip-joint are endangered by contagious disease.

Next in order comes the

II.—CONFINEMENT TO BED WITH WEIGHT AND PULLEY.

This is the old plan, and has much to commend it, although much more to condemn it. It has the advantage over the expectant plan of not bringing the whole weight of the body on a diseased femoral neck. If we can accept the postulate,

that the lesion is a rarefying ostitis in and about the centres of development, and that this rarefying ostitis, as a rule, terminates in caseous degeneration, we must guard against throwing any weight on this portion of the femur. It must be remembered, too, that in walking upon a limb either really or apparently shortened, the weight of the body is thrown upon this limb at a great disadvantage. We are all familiar with the thud-like step of a hip-limp. Is it any wonder that the trochanter sooner or later appears above Nélaton's line?

It is well known that the weight and pulley, in conjunction with the inclined plane, forms the preparatory treatment to the splint, if much deformity exist. A few weeks usually suffice, and then the long splint can generally be worn with more ease.

III.—THE AMERICAN METHOD.

This has been given the name by our transatlantic brethren, and is known as that plan which aims at portable extension with motion. The weight is thrown upon the perineum, and the splint is practically a perineal crutch. American orthopædists, with few exceptions, aim at producing sufficient traction to prevent any shortening or osseous deformity, and at the same time to preserve the motion at the joint.* Just how well this last aim is realized, we are in need of cases and statistics to state with anything like positiveness. I have no hesitation in classing myself among those who believe that any motion permitted a joint whose bones enter into its mechanism only procrastinates the treatment and militates seriously against any proper preservation of function.

IV.—FIXATION OF AND REST TO THE JOINT.

The appliances that have this end in view are numerous, and may be enumerated in the order of efficiency: 1. The "physiological plan," as advocated by Dr. Hutchison, of Brooklyn. This is well known as a high shoe on the foot of a sound limb, and a pair of axillary crutches. The limb is thus raised from the floor and swings, while the weight of the body is thrown on the axillæ. The reflex spasm of the periarticular muscles is sufficient, it is claimed, to fix the joint. Were the patient continuously on the crutches, the indications might thus be fairly met. At night, however, the weight and pulley are used. 2. Apparatus made to encase the hip and thigh, and used in conjunction with the axillary crutches and high shoe. This appliance consists of plaster of Paris, felt, leather, gauze, etc. 3. The long and the short extension-splints, with their various modifications. All these splints are secured by means of adhesive plaster to the limb, by means of which traction is made, and perineal bands fastened to a pelvic band. In reality the hip and the knee are fixed, while the patient walks on the perineum instead of the diseased limb. 4. The splint employed by Hugh Owen Thomas, Esq., of Liverpool, which aims at immobilizing the spinal column, the hip, and the knee, is more in accord with the principles advocated. This splint is incomplete without the crutches and the high shoe. Cumbersome as this apparatus appears to be from the published accounts of the same, I am convinced that a certain class of patients are better protected and get about more easily with such an outfit than we imagine. Let a patient once feel assured that his limb cannot get out of position, and that he can go about with immunity from injury, and he will accustom himself to almost anything. Through the courtesy of Mr. Thomas, I have had an opportunity of seeing some of his patients while under treatment, and they certainly seem contented and get about very actively.

Whether we in this country, satisfied as we are with the use of our portable perineal-crutch splints, will ever consent to fixing the spinal column as well, and to substituting the perineal for the axillary crutch, I have grave doubts. Indeed, I am quite sure that cases managed with the same assiduity that Mr. Thomas gives to his cases will terminate quite as successfully.

V.—OPERATIVE PROCEDURES.

The forcible correction of deformities under an anæsthetic, osteotomies, and excisions constitute the surgical means employed, but means such as these must be supplemented by apparatus in order to retain the advantage gained. Under osteotomies I wish to be understood as including linear osteotomy, drilling, and ignipuncture.

In the remarks I shall make by way of clinical illustration, I shall say nothing of the operative procedures. The subject of

excision is so hackneyed that little good can come out of a discussion. All thinking men are agreed upon its value as a *dernier ressort*, and, when otherwise employed, men differ, and will differ, according to individual experience and the value they attach to statistics.

Touching *brisement forcé*, as a means of correcting a bad flexion for instance, much diversity of opinion exists. The more conservative of orthopædic surgeons do not prefer this to gradual extension; in fact, it is strongly condemned. So far as my own experience goes, I am not a strong advocate of this plan. When one wishes to save time, and can feel reasonably sure of not aggravating or lighting up afresh a bone-lesion, then it may be done. Ordinarily, however, it is much safer, and consequently more commendable, to resort to gradual processes.

The theories upon which simple linear osteotomies and ignipuncture are based make these operations eminently justifiable.

Patients, as a rule, outside of hospitals are loath to submit to operations of this nature, and the results thus far published are not sufficiently reassuring to give one a strong argument for appeal to the lay mind. The pathology as yet rests on too insecure a basis. Men still talk about "distention of the capsule," "erosion of cartilage," "extension of the inflammatory process to the bone," and such-like theories of a bygone day, as if they were facts. The professional mind is not yet educated up to a sound pathology.

Drilling of the head and neck has not been employed always on properly selected cases, and the results therefore give one an unfair impression. Diagnostic skill has not been brought to bear with sufficient force. However one may favor this method of dealing with an early ostitis, for many reasons it seems doubtful whether it will ever become a popular operation. Elsewhere I have published some results furnished by my friend Mr. C. McNamara, of London.

For results of osteotomy for the correction of bad positions, I cannot do better than refer to the valuable work of my friend Dr. C. T. Poore on "Osteotomy and Osteoclasis," published by the Appletons.

To illustrate some of the results gained under the different methods non-operative, I shall incorporate a few brief notes of cases taken from my records.

(*A*) A young lady is now under my observation who has from the beginning of her lameness, many years ago, been under expectant treatment. She is in fair health, and is able to walk with much ease when not harassed by neuralgic pains,—a sequel to her ostitis. There is anchylosis at an angle of about 150°,—a comparatively good result as to position,—while the amount of adduction is not by any means great. There is only one inch shortening. Over the trochanter major is an open sinus, which to my own knowledge has been in existence for five or six years. The discharge is not profuse; on the contrary, it is scarcely sufficient to require at all times a dressing. What annoys the patient most is an almost constant pain in the outer portion of the thigh and around the knee. This pain, too, is aggravated by walking. But for this annoying feature and the pertinaciousness of the sinus, the result would be one better than the average.

Take now a case treated after the same plan nearly forty years ago. One year ago I had under treatment for fibrous anchylosis of the hip the following case:

(*B*) A man, 47 years of age, who gave me this history. When quite a lad, he had a disease at the hip, and was treated by blistering and occasional periods of rest. He was nearly a year an invalid,—was "laid up off and on." He never had any abscess, and gradually "the disease wore away," but the hip has always remained stiff. It never troubled him to any great extent, however, until 1880, when, from exposure he thinks, he began to walk with less facility. Finally, he became so lame and suffered so much pain about his hip that he sought relief in a hospital. Failing to get the desired relief, he tried other hospitals. When I examined him, I found only an inch shortening, with the usual amount of thigh-atrophy,—viz., two inches. The limb was rotated outwards over an arc of about twenty degrees, and he walked exactly like one who was convalescing from fracture of the femoral neck. He could flex the hip to an angle of 120° with a little effort, and, on extending from this position, he rotated the limb outwards, the act of extension being accomplished by a slipping of the head over a roughened surface. This movement I had him repeat several times, as it was to me a very odd "trick" on the part of the patient.

In seeking a solution, I could come to no other conclusion than this,—viz., that in flexing the thigh he must produce a subluxation of the hip downwards and backwards, which subluxation was overcome with this "click," or bony slipping, on extending the limb.

These movements did not excite any special pain, but walking and climbing stairs did excite pain, and altogether he was a great sufferer.

It occurred to me, after exhausting counter-irritants and the various forms of electricity, that relief might be afforded by freeing the hip of what adhesions might exist in this locality. Accordingly, I moved the hip one day, under an anæsthetic, to 90° in flexion and 170° in extension, but was unable to make any abduction or rotation. He did not get any near or remote relief from this operation. He was made worse.

Occasionally one meets with old cases that have been subjected to issues during the progress of the disease.

(*C*) In June of the present year a case was referred to me for advice regarding the best means of controlling a pain in the gluteal region. The patient was 28, and when five years of age had developed ostitis of the hip, for which she came under the care of distinguished surgeons. Issues were employed, cicatrices of which I found in the gluteal region. One of the issues existed for two years. No splints were ever used. Her treatment extended over a period of three years, but it was five years before she was regarded as cured.

From her tenth year until December, 1883, she had no relapses, and scarcely any symptoms that could be regarded as evidences of an exacerbation.

Last December she was unusually active, and, after a hard day's work in household matters, suffered excessively about the hip for a couple of days. A few days' rest in bed brought about relief, and her chief annoyance since that time has been her inability to walk moderately short distances without exciting pain in the gluteal region. She grows weary very quickly.

Her physical condition now is: a good physique; a marked lumbar lordosis; a thigh flexed at 135°,—*i.e.*, on overcoming the lordosis; two and a quarter inches shortening as measured from the anterior-superior spinous process; one and three-quarter inches shortening as measured from the umbilicus; two inches atrophy of the thigh; no joint-tenderness, and a very fair gait. Altogether, the result, for an anchylosed hip, is very good, and, but for the periarticular sensitiveness, would be all that one could expect.

These cases afford practical illustration of the kind of hips one may get by the old method of treatment. I regret to say that these are selected cases. I should like to tell of a case referred to me yesterday by the head of a noble charity:

(*D*) A little girl, flaxen-haired and wan, I found seated in the well-known high chair around which so many loving memories of our childhood fasten themselves, steadying herself as best she could by the foot-board and the arms of the same. Thus seated in apparent comfort, she scarcely seemed the patient I had been called to see. But could you have heard the piercing, the agonizing shrieks that issued from this frail human specimen as the mother took her into her arms, could you have seen the haste with which she grasped the knee with both hands, could you have seen how tearfully she resisted any attempts at moving either limb, could you have seen how acutely flexed both thighs were held, you would not believe me if I told you that this case developed disease of both hips directly under the surgeon's eye and while under treatment for lumbar caries, and that the signs of bone-disease at the hips developed slowly and according to rule.

This is not an isolated case. I could make a lengthy paper with the transcription of similar records. The time has passed when we can afford to disregard the appliances science has thrown into our way.

Take now, by way of illustration, a few instances wherein the long splint has been used:

(*E*) A boy, 14 years of age, was seen after three years' treatment, with this result: The health excellent; no pain for a year or more; six open sinuses, but the discharge therefrom is very light; the limbs are parallel, there is no shortening, and the patient walks with ease, although a little lame. The limb has been retained in good position, and no shortening has been allowed, while at the same time he has been walking all the while. These open sinuses give the doctor very little anxiety, and the boy has come to look upon them as of trifling import. The fact is that sinuses leading to carious bones may exist for several years without any grave significance. Very often they finally close permanently.

Cases come under observation, and histories are given, of treatment such as the general surgeon employs,—viz., a combination of the weight and pulley and portable apparatus. The text-books on surgery commend in strong terms this combination.

(*F*) In August a patient was referred to me from Kansas City by a gentleman who ranks high as a surgeon, and in his letter he remarked that during the progress of treatment he thought the result would be exceptionally good as to motion and freedom from shorten-

ing. This is what he did. Two years and a half ago, three months after the first signs of disease in the hip, he applied a long splint. The patient wore this awhile, then had weight and pulley in bed, then the splint again. Later an abscess formed, but this was treated according to surgical principles.

This is the result:

A well-nourished, hearty-looking girl, 8 years of age, on a crutch, with one and a quarter inches real shortening of the limb and three and a half inches practical shortening. The top of trochanter major is one inch above Nélaton's line; the angle at which it is possible to extend the thigh is 125°, to flex 75°. The usual amount of atrophy exists. A cicatrix on the upper and outer aspect of the thigh marks the site of the abscess. The disease seems fully arrested, and the child can walk on the limb, but has become attached to the crutch, and it is hard to make her abandon this aid in walking.

In July I saw a patient from Cincinnati, Ohio, with the following therapeutical history:

(*G*) Two years ago, very soon after the first signs of an ostitis of the hip developed, a Taylor's long splint was applied, and this she wore three weeks. It gave place to the weight and pulley, which was continued for fifteen months. Towards the close of this period an abscess formed and was opened, a sinus continuing eight months. In this time she wore a plaster-of-Paris bandage for three weeks. Since the removal of the plaster she has been on crutches.

The outcome of the above treatment is: She keeps the thigh flexed on the pelvis at an angle of 80°, making the practical shortening of the limb two and one-half inches, while there is no shortening as measured from the anterior-superior spines, the limbs placed symmetrically. There is also a marked degree of adduction, and a deep cicatrix on the outer side of the thigh. The joint-surfaces seem smooth, and there is a small arc of motion in all directions. Passive motion excites reflex spasm in the adductors, which spasm indicates that the disease is not yet fully arrested.

Now, these two cases represent very fairly the average result of bone disease about the hip when managed, as the case usually is, by two or more surgeons. And yet, as time goes on, they will walk with a much improved gait.

To show the termination of some cases that are under the care of orthopædic surgeons who differ as to methods of treatment, a brief narration of the history of a patient I saw first in 1882, while an interne of the Hospital for the Ruptured and Crippled, will suffice:

(*H*) The girl was then 15 years of age, and had worn a long hip-splint, applied by an accomplished specialist, for three years. The limb was parallel with its fellow, was one inch short, but the dropping of the pelvis on this side reduced the practical shortening to nil. There was no atrophy of the limb, no abscess, and the disease, although of long standing, seemed to be undergoing resolution. Coming to the hospital, she naturally had to give up the splint, and took to crutches, inasmuch as she was afraid to risk the limb alone.

From June, 1882, to February, 1884, the "expectant" treatment was pursued, and at the end of that time she had, as a result, one and a half inches real shortening, one inch practical shortening, an inch and a half atrophy, inability to walk without the crutches, and a stiff hip in the straight position.

In February she entered the New York Hospital for the purpose of having an operation done for the relief of the anchylosis. The hip was quite freely moved under ether, and the weight and pulley employed for six weeks, passive motion without an anæsthetic being employed occasionally during that time.

Since June I have had her under observation, using the long splint again, and with this she gets about without other aid. The *brisement forcé* in February has been attended with negative results.

To sum up, then, the points of interest in this case: 1. Long splint for three years employed by an expert. 2. Treatment by crutches and liniments for eighteen months at an orthopædic hospital. 3. *Brisement forcé* at a general hospital. 4. Long splint again. 5. A strong probability that she has five or six years of splint-treatment yet in store.

However prejudiced one may be against mechanical treatment, he cannot escape the conviction that had this case continued the long splint awhile longer, progressing favorably as it was, a good result would the sooner have taken place.

Little is heard now of the physiological treatment so ably advocated by Dr. Hutchison, of Brooklyn, a few years ago. My own results have not been such as to encourage me to hope for any great success.

(*I*) Recently I have examined a little patient with whom I began the crutch-and-high-shoe treatment fully three years ago. I had the case under observation quite closely, and the directions have been followed with precision. When the plan was adopted the case

had already reached the second stage. Six months afterwards an abscess appeared in the iliac fossa, and was distinctly made out by myself. Six months later it had disappeared. This child had very little pain during the whole course of treatment.

The condition now is, a comparatively easy gait without pain, one and a half inches shortening as measured from the anterior-superior spinous process, and four inches as measured from the umbilicus (four inches practical shortening). Can flex quite as freely and quite as fully on this side as on the sound side, while extension is limited to 120°.

This, you see, is not a fine result; and yet I am compelled to bring it forward as one of my best, if not the best of any yet obtained by means of the "Physiological Method."

To Mr. Hugh Owen Thomas, of Liverpool, I am indebted for the opportunity of examining a sample case under his care.

(*J*) One day early in September a child was brought to my office with a note from Mr. Thomas. I soon learned this history.

About three years ago I had examined the case, when it was in its incipiency, pronouncing a diagnosis without hesitation. I did not see it again, but the child was taken to Dal Cin, the bone-setter, in her Italian home. Here she remained nine months, getting poultices and an occasional stretching. Thence to Liverpool, where the case came under the care of Mr. Thomas, who has had it under his personal observation for two years, with this result:

A very active child, still wearing the fixation-splint employed by Mr. Thomas, supplemented by a three-inch high shoe on the sound foot and a pair of crutches; the limb parallel with its fellow, one inch shorter and one and a half inches smaller; the joint apparently anchylosed. There was no soreness or pain, and a cure seemed long since attained.

We had here a straight limb, a short limb, and a stiff joint. Curiously enough, three days later, another case was brought me for my opinion as to the propriety of suspending all treatment, and this was the coincidence:

(*K*) The family-name of the child was the same as the one whose case I have just reported. The disease began about three years ago. I had seen the child and diagnosticated the lesion early, and had not had the opportunity of treating the same. This child was taken to an orthopædic establishment in a neighboring city, where she was placed in bed with a weight and pulley attached to the limb, and here she lay for sixteen months. At the end of this period crutches and a high shoe were employed for six months. The result is almost identical with that in the Liverpool case as to position, atrophy, shortening, and stiffness.

Both were good, yet far from perfect. In both treatment was begun comparatively early, both were managed with much care, and both reflect credit on the surgeons in charge.

In studying comparative results, I am forced to the expression of the following convictions:

1. The "expectant" treatment is not, in an orthopædic or a surgical sense, any treatment at all. Cases that have no medical or surgical attendance whatever are followed, so far as my own observation goes, with just as good results.

2. Traction with motion is based upon a false pathology, and does not, in my opinion, do what its advocates claim for it. The motion is certainly not as great, as a rule, as one would be led to expect.

3. Fixation and rest, when properly carried out, yield better results, I believe, than any other plan.

4. The key-note in the treatment of ostitis of the hip is not the splint employed, not the crutch, or the high shoe, but it is the management of the case. Some men can get admirable results with any kind of splint. The case must be closely watched, the apparatus must be kept fully up to its duty, the indications must be met, and one must not grow impatient, because time is an important factor.

Let one be early impressed with the tediousness of the case, and let him also make up his mind that the case must be managed rather than treated with any special form of apparatus.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,

Ophthalmic Surgeon to the Episcopal Hospital.

BRAIN-ABSCESS WITH DOUBLE OPTIC NEURITIS.

DR. GEORGE S. NORTON reports the following case. William H., æt. 22, received a blow on the head from an ice-hook. For two weeks he was confined to the house, part of the time in bed. He seemed, however, to recover

from the effects of the blow, but one and a half years later began to suffer from severe and almost constant headaches. A few months later he was obliged to stop work on account of a severe "cold and fever." In a few days the R. E. became very much swollen, as well as the corresponding side of the head. Then daily muscular spasms for nine days supervened. They ceased, but recurred again in about a month, lasting for three days. About this time blindness was noticed in the R. E.; paralysis of speech and also of the extremities occurred. L. E. became blind about five weeks after the blindness was first noticed in the R. E. Three weeks after this the convulsions returned. Examination at this time revealed the following: "Patient lies helpless in bed, only slight movements of either arms or legs being visible. Lower jaw is fallen, apparently from paralysis of the masseters. He seems rational, but is unable to speak. Practically blind in each eye. Much swelling of the lids of the R. E. Some chemosis of the conjunctiva, with prominence of the eyeball. Cornea in a state of suppuration. The right side of the head is much swollen and hard. At the edge of the orbit, near the outer canthus, is a fistula from which pus escapes. In the L. E. the pupil is widely dilated, the media are clear. There is a characteristic engorged papilla." About a week later patient became comatose and died.

The autopsy showed caries of the orbital plate of the frontal bone, corresponding to the apex of the lesser wing of the sphenoid, by means of which an opening had become established into the right orbit. A large closed sac of pus occupied the place of the right middle cerebral lobe, no trace of which remained.

[It is a question in the above case whether the carious bone was primarily affected by the injury or not. The pus-sac was in contact with, but not adherent to it; no communication existed between the former and the orbital cavity. These facts, together with the acute brawny swelling of the right side of the head, suggest the following explanation. The caries of the orbital plate was simply due to the pressure of the pus-sac; it seems not to have been accompanied by adhesive inflammation; possibly, therefore, the part which was played by the caries in the production of the orbital inflammation may have been very slight. The train of symptoms seems to point rather to a metastatic inflammation of a venous sinus, involving secondarily the ophthalmic vein and its branches, and also the veins of the diploic structure of the right side of the head; the veins of the diploë communicate both with the sinuses of the dura mater and with the pericranial veins. It is therefore not so difficult to explain the brawny swelling of the side of the head, a symptom, so far as the reviewer's experience goes, not usually associated with cases of orbital abscess. H.]

GLAUCOMA FROM HOMATROPINE.

Dr. Sachs reports the following case. The patient, a blacksmith, æt. 58, applied for a prescription for glasses. The anterior chambers were shallow, pupils of normal width. Tension also normal. The right lens was slightly cloudy, and in order to examine this more closely a drop of a one-per-cent. solution of homatropine was instilled. Fundus, visual field, and color-sense normal on each side. Twenty-six hours later he appeared, making the following complaint. Almost immediately after leaving the clinic, pain occurred in the right brow and temple, with decrease in sight. There was also the sensation of giddiness. The symptoms, however, were not severe enough to cause great annoyance to the patient. Examination showed that a typical glaucomatous affection of the R. E. existed. Cornea, especially the central part, steamy. Anterior chamber narrow to the same extent as before the instillation; pupil rigid and dilated to five and a half millimetres; fundus dimly seen, but the jumping arterial pulse of glaucoma was easily observed. Tension very much increased. Vision reduced to counting fingers at three metres. Visual field narrowed on the temporal side. Immediately several drops of one-per-cent. solution of eserine were instilled in the R. E. One hour later the glaucomatous symptoms had vanished; cornea was clear, pupil reduced to one and a half millimetres in diameter; tension less than that of the left eye. Vision in large measure returned. In two days, with further use of the eserine, the vision attained the amount existing before the instillation, and the visual field became normal in extent. The eserine was stopped. In course of six days the pupil was nearly as wide as that of the

L. E. The tension of R. E. still a little less than that of the L. E. The fundus was normal. Further examination of the patient drew out the fact that for four years he had experienced at times, especially when working hard, a dimness of sight which would last perhaps fifteen minutes; there would be also giddiness, but not the slightest ocular pain.—*Centralblatt f. Augenhlk.*, September, 1884.

[This case recalls again the practical lesson of using mydriatics with caution in patients over fifty years of age. The ill effects from atropia-instillation in glaucoma, the fact that acute glaucoma has been developed by duboisia,* and the above case produced by homatropine, may well lead us to suppose that, where the predisposition to glaucoma exists, *any* mydriatic may bring on an attack. It is an important practical question, in view of this, whether it is a wise thing to use a mydriatic in refraction cases over fifty years of age. This very case of homatropine glaucoma shows how impossible it is to determine from the condition of the eye itself whether the mydriatic may be used safely or not. The reviewer inclines to the belief that it is safer to be satisfied with the best correction that can be given without the mydriatic in such cases. In younger individuals the use of the mydriatic seems as yet indispensable. H.]

PEMPHIGUS OF THE CONJUNCTIVA.

Steffan, of Frankfort, reports the following instance of this rare affection. A woman, æt. 73, presented herself for treatment on account of an inflammation of the L. E. There was a moderate amount of conjunctival inflammation, with a peculiar cicatricial process running on in the inferior conjunctival sac. Some of the cilia of the lower lid were drawn inwards, thereby irritating the cornea. With continuance of the inflammation the inferior conjunctival sac became shallower, finally disappearing in the outer third. The cause of this cicatricial process could not then be discovered. There was no evidence of granular conjunctivitis. The condition was evidently that described by Gräfe as *essential shrinkage of the conjunctiva*, and by Stellwag as *syndesmitis degenerativa*. The R. E. then became inflamed, and the same cicatricial process began to develop in the inferior conjunctival sac. Finally scarce a trace of the sac remained, the lower lid being closely united to the ball. A month after the inception of the disease an eruption of typical pemphigus vesicles occurred, first on the left, then on the right eyelid. On the latter, during one and a half years' observation, the vesicles would come and go. There also occurred during this time an affection of the throat which was diagnosed as pharyngeal pemphigus. Steffan draws the conclusion from his case that this confessedly obscure condition of conjunctival shrinkage is really the result of a pemphigus eruption, and that the proper name for the condition is pemphigus conjunctivæ.—*Klin. Monatsblätter*, August, 1884.

Schweigger reports a case of the same kind. The patient was a robust old man. There was marked injection of the scleral conjunctiva of each eye, a partial shrinkage of the inferior palpebral conjunctiva, and disappearance of the inferior conjunctival sac, while the upper lids were healthy. A few months later a pemphigus vesicle developed itself on the right scleral conjunctiva. For years previous similar vesicles had been observed on the mucous membrane of the mouth.—*Centralblatt für Prakt. Augenheilkunde*, June, 1884.

ANOMALIES OF THE OPTIC DISK.

I. Coloboma.—Remak describes the following case. The patient was a woman æt. 26. Both eyes have optic disks of about the same diameter, and are slightly hypermetropic. The coloboma was in the R. E., the left optic disk being normal. The right disk was embraced by a grayish-white staphylomatous crescent situated to the nasal side, and including two-thirds of the disk-circumference between its horns. In the middle of the disk was a deep physiological excavation with a diameter about one-third that of the disk. The edge of the excavation was sharply defined; at the nasal side a shallow depression in the disk-surface communicated with the excavation, and also with a split in the nerve-tissue. This last extended to the margin of the disk. There was no other evidence of defective development in the eye. A list of eight papers bearing on the subject is appended to the history of this case.—*Centralblatt f. Prakt. Augenheilkunde*, August, 1884.

* Acute Glaucoma induced by Duboisia. Reported by Albert G. Heyl, M.D. Amer. Jour. Med. Sciences, April, 1882.

II. Malformation.—Stood reports two cases: (*a*) Patient was a woman, æt. 40. V. in each eye about normal. With the ophthalmoscope the left fundus was normal. On the right papilla a vertically-oval bluish-white spot was noticed close to the margin; its horizontal diameter was one-sixth to one-eighth that of the papilla. It was in the temporal half of the papilla. From its appearance it might readily have been taken for a cyst, but close examination showed it to be an excavation with an overhanging rim. Examination of field showed that a scotoma existed between the *blind spot* (Mariotte) and the fixation-point. There was scarcely any indication of the ordinary physiological excavation. (*b*) In this case an excavation similar to that described in the first patient was observed close to the temporal margin of each disk. The excavations were connected with large physiological cups occupying the temporal halves of the disks. In the R. E., some distance below the papilla, a well-marked choroidal coloboma was observed. In the L. E. the choroid was perfect, with the exception of slight pigment-maceration about the macula.

[Remak's case seems clearly due to defective closure of the fœtal cleft, as the depression connects with a fissure running to the nerve-margin. Stood's cases seem to have a different origin. That it was fœtal seems to be indicated by the coexistence of a choroidal coloboma in the second case. The evident isolation of the depression, in the first case, from the porus opticus points rather to some local disturbance of nutrition, by reason of which the level of the disk was caused to sink. The resemblance of these excavations to those seen in glaucoma is worthy of note. H.]

COLOBOMA OF THE MACULA LUTEA.

Remak observed the following case. Patient æt. 16. R. E. was myopic 3 D; otherwise normal. In the L. E. the macular region was occupied by a sharply-defined oval spot; its vertical diameter was 2 PD, its horizontal 3 PD. This area in spots was intensely white, in others covered with accumulations of pigment; several choroidal vessels were also observed upon it. A branch of the arteria retinæ superior ran across the spot through the pigment-accumulation. There was no trace of choroidal or iris coloboma in either eye. The vision of L. E. was much decreased, fingers being counted at twelve feet.—*Centralblatt f. Augenheilkunde*, September, 1884.

[The etiology of these cases is not as yet clear. The prevailing opinion is that advanced by Manz,—viz., that they are due to imperfect closure of the fœtal cleft. This is confessedly a doubtful hypothesis. It is perhaps impossible to reconcile these defects in the macular region with the position of the fœtal cleft,—viz., downward or downward and inward from the disk. Nor does the supposition that the ball rotates during gestation seem materially to strengthen the hypothesis. It seems to the reviewer that it is illogical to refer the various forms of congenital tissue-defects to the fœtal cleft, as if there must be necessarily some connection between them. Certainly these tissue-defects do not imply the previous existence of a congenital cleft, but rather that for some reason the tissue-formation has failed to attain its full growth. The cause may be sought in the defective state of the fœtal blood-vessels contiguous to the defective tissue. H.]

DETACHMENT OF THE UVEAL PIGMENT IN DIABETES MELLITUS.

Hirschberg reports the following experience. A woman, æt. 54, with double cataract associated with diabetes mellitus, had a preparatory iridectomy made on the R. E. Operation was performed without difficulty, and there was no posterior synechia. Almost the entire pigmentary layer of the portion of iris removed remained behind. Five days later a preparatory iridectomy was made on the L. E., with the same experience. The pigment-layer was removed by the forceps. Hirschberg states that among hundreds of iridectomies he has observed this phenomenon but once, and then in an anæmic girl who had lamellar cataract.—*Centralblatt f. Augenheilkunde*, June, 1884.

[This clinical experience may be taken in connection with the observation of Becker made on a young girl, who died of diabetic coma two days after preliminary iridectomy on one eye and extraction on the other. The uveal pigment-cells were found very greatly swollen and loosened. H.]

PERIMETERS.

Dr. Dubois-Reymond describes a new

perimeter for testing the visual field. The main advantages ascribed to the instrument are absence of complicated mechanism and cheapness of price. It has the arc and chin-rest of the instrument of Förster, but the movable test-object is superseded by an object on the end of a blackened staff held in the hand and moved along the arc. The maker is Hr. Mechaniker Pfeil, Dorotheen Strasse 35, Berlin. The price is forty-six marks.—*Centralblatt f. Augenheilkunde*, September, 1884.

Dr. B. Alexander Randall, of this city, has recently devised a perimeter consisting of a brass arc backed with iron and an adjustable chin-rest, mounted upon a base of oak. The object is moved along the arc by an endless cord worked by a milled head near the centre of rotation. It seems to be much lighter than the heavy German instruments, and to fulfil the same purpose. The cost is ten dollars; the manufacturer, Mr. Ivan Fox, 1635 Chestnut Street, Philadelphia.—*Medical News*, October 11, 1884.

Priestley Smith describes a new, self-registering perimeter. It is an improved form of the instrument previously devised by him.—*Centralblatt f. Augenheilkunde*, June, 1884.

ELECTRIC LAMP FOR OPHTHALMOSCOPIC WORK.

Birnbacher describes an illuminating apparatus specially adapted for ophthalmoscopic work at the bedside. It consists of a Swan lamp enclosed in a cubical casket of forty millimetres' dimensions. The front face of the cube is open, and has connected with it a tube thirty-five millimetres in diameter and twenty millimetres long. Sliding upon this is another short tube, which has a convex lens set in it; the latter can thus be moved toward or away from the lamp, and thus parallel, convergent, or divergent rays caused to issue from it, as may be desired. The electric current is applied by a small and compact battery of six "Faure-Sellon-Volkmar" accumulators. Thus the light may be maintained for two hours at a time. The lamp may be also used for microscopic work, the light being tempered by a blue glass in front of the lamp. It also may be used at the operation-table when artificial illumination may be required.—*Centralblatt f. Augenheilkunde*, June, 1884.

REPORT OF A CASE OF ACCIDENTAL HEMORRHAGE COMPLICATED WITH RIGID OS, RESULTING IN THE DEATH OF MOTHER AND CHILD.

BY G. MAXWELL CHRISTINE, A.M., M.D.,
Philadelphia.

THROUGH the courtesy of Dr. J. D. Nash, the physician in charge, I have received permission to present the following account of a remarkable case. In a glance over many medical works, I have been unable to find anything like it, and there are probably few physicians who have had cases presenting similar features.

On September 8, Dr. Nash was summoned to Mrs. G., primipara, believed to be in the seventh month of her pregnancy. She stated that during the latter weeks of her pregnancy there had been some œdema of both legs, but this now gave her no unusual annoyance. For some hours the patient had suffered from intense pains attending a severe attack of diarrhœa. She was much prostrated; her face was pale and her pulse weak; but there were no signs present of labor. Under appropriate treatment the pains were relieved and the diarrhœa checked. For the next week she was enabled to go about her household duties, and those who saw her state that nothing unusual marked her appearance except pallor; but on the 14th, at about 2 P.M., the doctor was again summoned to Mrs. G., who had then been in labor for some hours. He was at once struck by her marked pallor and the weakness and rapidity of her pulse. Pains were occurring every five minutes. The appearance of the bed and the cloths which had been used showed that there had been a considerable loss of blood, and examination revealed that there was still slight bleeding. The os was high up, looking to the left, narrow, and exceedingly rigid, particularly during a pain. It was neither dilated nor dilatable, and the doctor very truly said that "nothing had ever so reminded him of a button-hole as that os." The opening was surrounded by a tough, unyielding, ring-like ridge, which was like the edge of a coarsely-made button-hole. The index finger could be introduced with much difficulty through this narrow slit up to the second joint, but it always gave rise to much pain and strong uterine contractions. The membranes she thought had been ruptured, but what had been supposed by the patient to be a breaking of the bag of waters must have been a gush of blood. The head could be felt quite high up, and during a pain made some movement as if to descend. The hemorrhage suggesting placenta prævia, the finger was swept around within the os to discover the presence

of the same, but there was no placenta within reach.

No correct estimate can be given of the amount of hemorrhage, but, judging from the fact that there had been a continual flow, with an occasional gush, for some hours before the doctor was called, the loss must have been great. The wasting now was not alarming, and the finger kept within the os easily checked it. But after retaining the forefinger within the os as a tampon for an hour, finding no change taking place in the condition of the os, and that a second finger could not be admitted, the doctor, at about three o'clock, determined to replace the use of the finger by a tampon of cotton and meanwhile call in assistance; but in half an hour so much blood was found to have oozed through that the tampon was removed.

After much manipulation a second finger was now partially inserted. The two fingers now effectually closed up the os, and served admirably as a tampon. They were therefore retained in this position for three-quarters of an hour, an effort all the while being made to dilate the os enough to admit a third finger. At the end of that time, finding his efforts to pass in another finger ineffectual, and that his fingers had become temporarily paralyzed from the constant pressure kept up, the doctor was obliged to desist.

It was at this time that I arrived. Dr. Nash hurriedly reviewed the case and requested me to make an examination. I found that there was still hemorrhage, but not very abundant. The os looked backwards and to the left, and was a little difficult to reach. It presented the button-hole character as described, but had evidently contracted after the doctor removed his two fingers, for I could insert but one. The membranes were intact, and the head was still high up. Pains occurred every four or five minutes, at which times the os would contract very forcibly, but it was very evident that they were having no effect in dilating the os. At last, after tugging at the os for many minutes, I succeeded in partially inserting a second finger. The membranes now slightly bulged during a pain, and, as the hemorrhage still continued unless controlled by a tampon or by the fingers, I ruptured them. There was but a slight escape of water, and this appeared to be unmixed with blood. We hoped, after the rupture of the membranes, that the head would further descend and fill up the os; but this did not take place, and some bleeding continued.

Belladonna ointment was now plentifully smeared upon the os, and the use of the fingers as dilators still persevered in; but no immediate effect was secured. In order to give the belladonna time to act, and meanwhile continue the control of the hemorrhage, we again employed a tampon of cotton, which was kept in place by a T-bandage. A pledget of cotton was covered with the ointment and placed against the os before the tampon was introduced. The tampon was allowed to remain for an hour, when it was removed. The os had not changed, and was as rigid as before. The head had not descended very much, though its position was normal and the pains fairly strong.

Stimulants were administered, and, to promote better circulation in the cold limbs, bottles of hot water were placed at the feet and along the legs.

At about seven o'clock, Dr. W. A. Chandler arrived. By his advice, milk was administered in addition to the whiskey, and hot-water injections directed against the os. These injections were kept up for some time, but without evident effect. The belladonna ointment was again resorted to, and efforts at dilatation made with the fingers. When the fingers of one became tired, another took his place, and so the three physicians alternated in their efforts to bring about dilatation. A suppository, which had been ordered prior to the arrival of Dr. Chandler, containing one grain each of the extract of opium and belladonna, was inserted into the rectum. Efforts to make the uterine contractions stronger and more effective were made by pressure over the uterus, and attempts made to bring the head lower down. At eight o'clock the os had so relaxed as to permit the skilful introduction by Dr. Nash of a small pair of Simpson forceps; but, immediately following their introduction and locking, the os again firmly contracted and further complicated matters by forming a tough and seemingly unyielding ring around the shanks of the forceps, through which it was at first impossible to bring the head. It was therefore with much difficulty that the head was brought down to the perineum, which was not accomplished for three-quarters of an hour. At this point the instruments were removed and nature made to effect the rest of the delivery, which it did in about ten minutes, without a tear of either the cervix or perineum.

The child was dead, as was expected from the fact that fœtal movements had ceased more than three hours before. It was not injured in any way, nor did it show any marks of the forceps. It was of the average size of a seven and a half months' fœtus. The bones of the head were softer and the fontanels larger than usual, but in all other respects it was normal and healthy. After the birth of the child a little time was allowed to elapse before the expression of the placenta, for there was no more than ordinary bleeding. The placenta was finally removed without difficulty, perfect uterine contraction secured, and a binder and compress applied.

An examination of the placenta showed that one-third only of its surface was normal in appearance; the other two-thirds was dark with clotted blood, and in marked contrast

with the normal condition of placental tissue. This changed portion of the placenta had evidently been separated from its uterine attachment, and was conclusively the cause of the hemorrhage. This hemorrhage was twofold, coming, as it must have done, from both the uterine and placental surfaces, and because of the latter character the death of the child in utero is very readily accounted for.

For some little while after the removal of the placenta our patient rested very easily. She was perfectly rational, complaining only of a little smarting at the genital fissure, and was disposed to assist herself if she had been permitted. The uterus had firmly contracted, and the amount of bleeding continued to be normal. Her pulse was rapid, her features blanched, and her extremities cold; but there was cause for believing that, under the stimulating influence of whiskey and milk and the observance of quiet, she would rally very well. We were, of course, afraid of shock, but at this time we had little reason for expecting it to be very great. However, this favorable condition of things did not last very long, for symptoms set in which excited alarm. The pulse became so rapid and feeble as at times to defy counting, the speech became wild and delirious, and the patient restless and determined to get out of bed. She became oblivious to the fact that her child had been born, and complained that we were pulling too hard upon the forceps. The extremities became colder, the hands lost their warmth, the lips became deathly, and the eyes gradually assumed a staring look. Her strength slowly gave way, and at about half-past nine it was evident that death was creeping upon her. Consciousness ceased, and the respirations became stridulous. Tincture of digitalis and carbonate of ammonium were ordered, the administration of stimulants continued, and every possible effort made to arouse her; but all was in vain. At a little after ten o'clock she died.

REMARKS.—The above case is interesting only because of the complications. The mortality of accidental hemorrhage, *per se*, unless concealed, is not very great, but the complication with a rigid os affects very seriously the prognosis. If the case had been one simply of hemorrhage, the treatment would have resolved itself into the dilatation of a normal os, the administration of ergot to its physiological limit, the firm contraction of the uterus by abdominal pressure, and the consequent speedy delivery of the child. Ordinarily this is very quickly done; but in the case under consideration six and a half hours' tedious effort was requisite to bring about such a result, and then, unfortunately, too late to save either mother or child.

A rigid os is at all times troublesome, but the worst thing to fear in such cases is at the most a protraction of the labor. So that either of these two conditions occurring alone need not necessarily occasion alarm; but united they offer cause for grave apprehension.

The use of ergot in cases of accidental hemorrhage is commendable, but its undoubted action upon the circular fibres of the cervix contra-indicates its use when there is rigidity of the os. Prior to my visit to the patient one drachm of the fluid extract of ergot had been administered, but until the head was brought down upon the perineum no more than this one dose was given.

If we could have had a Barnes' bag, dilatation *might* have been brought about a little earlier, but, owing to the circumstance that the day was Sunday and we were far removed from anybody who had one in his possession, none could be procured. However, the use of the fingers very rarely fails to secure dilatation, and it is doubtful if a Barnes' bag would have given us any very efficient aid. The os was so contracted the greater portion of the time that it was a question whether a Barnes' bag could be introduced.

Chloroform and chloral could not be used, on account of the condition of the patient, and nipping the cervix with the scissors to allow the immediate application of the forceps did not meet with the approval of all the physicians.

One other complication which contributed to the prolongation of the labor was the position of the os. At each examination it was necessary to carry the finger far up to the right and pull the os forward to the median line, and keep it in this position as long as possible. This condition was evidently due to a malposition of the uterus at the time of pregnancy, development then not taking place symmetrically.

The cause of the placental separation could not definitely be ascertained. We had no knowledge of any accident that might have caused it. It has been mentioned that on the 8th of the month our patient had a severe attack of pain with diarrhœa, and that during the latter months of her pregnancy she had œdema of the lower extremities; with this œdema there may have been albuminuria. Our patient was anæmic during the last week,

but her pale appearance was attributed to the results of the diarrhœic attack. It is impossible to do more than conjecture as to whether any one of these conditions gave rise to the placental separation. The patient was exceedingly anxious to have her child, and, when questioned, denied having made any attempt at abortion.

The death of the child was evidently due to hemorrhage.

The death of the mother was unexpected. Whilst the loss of blood prior to the visit of Dr. Nash was great, and would soon have ended the life of the mother if not controlled, the loss of blood from the time of his visit to her death was not more than many women suffer in childbirth without showing the least symptom of depression. Her strength during the entire ordeal was remarkable, and after the birth of the child was for several minutes of such a character as to be cause for congratulation. The weak pulse, however, and the cold extremities were sufficient warning for us to anticipate a reaction. But symptoms of shock quickly supervened, and all efforts to arouse the patient were futile.

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THE RELATION OF THE MEDICAL COLLEGES TO PRELIMINARY EDUCATION.

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(*An abstract of a paper read before, and published with the imprimatur of, the American Academy of Medicine, at its Annual Meeting, held in Baltimore, Maryland, October* 28 *and* 29, 1884.)

THE principal objects of this Academy are to encourage preliminary education of a high standard before entering upon the study of medicine, as well as to elevate the profession,—that is, to raise the educational qualifications of the profession. In attempting to carry out these objects, it is the intention to persuade, if possible, the medical institutions of instruction to assist us in this laudable movement by raising their requirements for matriculation, instead of that of the payment of a fee only; and also to elevate the educational qualifications of the profession by enlarging the curriculum and lengthening the time of study to three and four years in graded courses, so that a more extended and thorough knowledge of medicine can be obtained before granting the degree and placing the graduates before the public as medical practitioners.

Two years after the organization of this Association, the Pennsylvania State Medical Society took up the subject at its meeting in May, 1878, and passed a law forbidding any of its members accepting students lacking the prescribed educational qualifications, to determine which every county medical society has been obliged to appoint annually a committee to examine every one desiring to study medicine, before being accepted by a preceptor.

The State Board of Health of Illinois, under the personal exertion and supervision of its able secretary, Dr. John H. Rauch, has made herculean efforts and accomplished very much in requiring the proper and efficient education of the physicians practising in that State. It has given the key-note to all the other States having a State Board of Health. From the action taken in Illinois, many of the schools throughout the country have changed the curriculum to a higher standard for both matriculation and graduation,—that is, have advertised such changes; but we will see later if they are honestly meant and will be carried out.

The great trouble and opposition come, unfortunately, from the older and leading schools, especially those in the larger cities, where quantity rather than quality is looked at, and thus the country is flooded with physicians, many of whom have the degree, with little if any qualifications to support it.

In looking over the Fifth Annual Report of the State Board of Health of Illinois, some very interesting facts in relation to the position taken by the various medical schools in the United States on the necessity of a preliminary education before admission to the study of medicine are to be learned.

According to the Report, the total number of medical schools in the country is ninety-one. The number now exacting an educational requirement as a condition of matriculation is sixty-one, where heretofore only thirty classed themselves in favor of an elevated standard.

The total number requiring attendance on three or more courses of lectures before graduation is sixteen, while forty-three

recommend, but do not compel, such attendance.

Fifty-six regular colleges and universities publish that certain preliminary requirements are necessary for matriculation. But in this list of schools there are some, perhaps many, which really should not be classed with those in favor of higher education for the student and practitioner of medicine. Some of these institutions have set their requirements at so low a pitch that it would have been fairer and more honorable to have said, "Requirements, none. We want students and money, and not a higher standard of education."

Let us see, from their own reports, what their requirements are:

"Evidences of at least a fair English education."

"Evidence of a good English education."

"If necessary, an examination by the dean or registrar."

"Evidence of a good English education."

"Preliminary education and training sufficient to enable him to profitably and properly engage in the study of medicine."

"A creditable English education."

"Sufficiently advanced in an English education to study medicine."

"Evidences of a fair preliminary education."

"A good English education."

"A good common-school education."

"At least a thorough English education."

"A certificate from a student's preceptor of his moral character, and that he is duly entered and properly qualified to study medicine. The responsibility of sufficient preliminary education rests, of necessity, with the private instructor."

"The responsibility of preliminary qualification must rest with the private instructor."

"Evidences of a good ordinary English education."

"An examination, if considered necessary."

All these requirements are very weak, and their enforcement improbable. In the schools where evidences of a good, fair, or thorough English or common-school education are mentioned as necessary for matriculation, nothing is said as to how these evidences are to be obtained; and "An examination, if considered necessary," is so far from the mark that nothing said would have been better. Still worse is the putting the responsibility of preliminary qualification on the private instructor. It is shoving the responsibility with a vengeance. And these schools are accepted by the State Board of Health of Illinois!

Now, can or should these institutions be classed with those who are brave enough to say to the world, "We purpose assisting in the higher preliminary education in the medical student in this country in perfect honesty and good faith"? I claim not; and therefore, making the deduction, there are but forty-one regular colleges in this country which are properly professing to raise the standard of education. Again, how many of these forty-one carry out to the letter that which they profess to do? I am sorry to say but few,—from what I learn directly, so few that it astonishes me that the State Board of Health of Illinois is so deceived by the mere declaration or announcement of many of these schools that they can accept their diplomas without a State examination. If all the schools should declare in their announcements, as a mere cover, that evidences of a good English education are required for matriculation, and continue the free and loose way of matriculating any one paying the fees, and still persist in pursuing the old course of delivering twice in two years the same lectures, the State Board of Health of Illinois and of the other States having the same rules and customs will be greatly deceived, and still permit some as poorly prepared and improperly educated physicians in their State as in former years. Only a short time ago I heard a high officer and professor of a medical school say, "We wish to do all this in relation to the preliminary qualifications; but what are we to do with the students who come to us? We must admit them." Let me say there is no "must" about it, if there is honesty in the intention of elevating the standard of the profession, and the schools will look at it in that light instead of from a monetary point of view.

At two of the meetings of the Pennsylvania State Medical Society since 1880, I heard reports from some of the county societies, in which it was stated that young men rejected by their committees on preliminary examination, and recommended to take a course of study in a good Eng-

lish and classical seminary previous to their entering upon the study of medicine, had been matriculated almost immediately after in medical schools which claim to require preliminary educational qualifications before matriculation.

I have been informed by many graduates, as well as by students, that when they matriculated no questions in relation to their educational qualifications were asked. The presentation of a letter from some physician, especially a former graduate of the school, acting as preceptor or friend, with the conventional fee, was all that was needed.

All this is not sustaining the effort of the State Medical Society to elevate the profession. Certainly higher education in the medical profession is as necessary as in the other learned professions, if not even more so, for the correct understanding and judgment of the complicated studies relating to it. A high conservative power is wielded by it for the well-being of the whole people, and every legitimate means should be used to foster and enforce it, especially by government laws; and the sooner every State has a Board of Health, with a committee of examiners of highly and thoroughly educated physicians to examine and license every one desiring to practise medicine, no matter from what institution the diploma is obtained, the better it will be for scientific knowledge, the standing of the profession, and the interests of the people.

There are thirty-six schools which have no preliminary requirements for matriculation, and which take all who come, educated or not, who are able to pay the five dollars matriculation and fees.

Of the number of matriculants of the different colleges, those advertising preliminary requirements of some kind had last year 4393, while the no-requirement institutions had 5808, as far as can be obtained. This shows the readiness with which constant overcrowding of the profession takes place, the colleges graduating many who, from the want of proper mental training, are entirely unfit to contend with others who have been so favored by the proper and necessary education to grasp the thoughts and requirements of the thorough study of medicine, as to be able to show to the world that they represent a learned and liberal profession, and claim to rank as peers among educated men.

TRANSLATIONS.

The Use of Caffeine in Cholera.—At the November meeting of the Société de Thérapeutique, Paris, M. Dujardin-Beaumetz endorsed the recommendation of M. Huchard, of hypodermic injections of caffeine (.10 gramme, or 1½ grains) repeated several times daily, but insisted upon its administration in combination with benzoate of sodium, a substance in which it readily dissolves. Among the many remedies vaunted for cholera, some are good, a few are inoffensive, but there are some which are positively bad, and among these he would class subcutaneous injections of morphine, which are so generally recommended.

Taking a broad view of the disease from the stand-point of therapeutics, there are two varieties of cholera patients,—those who micturate and those who do not. When the morphine is given by subcutaneous injection, in the latter class, three things may happen: it is not absorbed, and remains where it is deposited; it is absorbed without being eliminated, and poisons the patient; or, finally, where taken up and eliminated consecutively, it may exist in too great a quantity in the system. It is, therefore, a dangerous remedy; but we should not on this account entirely banish opiates from the treatment of cholera.

M. Dujardin-Beaumetz equally and alternately employs subcutaneous injections of caffeine and of ether. He also proposes to try the treatment now employed by M. Hayem at the Hôpital St.-Antoine,—viz., when it is found that, in spite of stimulants of all kinds, the cold stage has been reached, there are injected into the veins two and one-half litres (five pints) of a solution of sodium chloride and of sodium sulphate at a temperature of 38° Cent. The patient, it is said, at once revives, when, profiting by his intense thirst, he is made to drink large quantities of alkaline solutions. This is done because the blood is always acid in cholera subjects. This method appears to have already given good results. One thing is certain, however, that it is entirely inefficacious among alcoholic subjects.—*Le Progrès Médical.*

Opening of Mastoid Process.—Dr. Schwartze, of Halle, at the International Medical Congress, discussed the operation

of opening the mastoid cells, and gave the following as indications for operative interference:

1. In acute inflammation of the mastoid apophysis with retention of pus in the bony cells, if, after the application of antiphlogistics and Wilde's incision, the œdematous swelling, the pain, and the fever have not subsided.

2. In chronic inflammation of the apophysis, with subcutaneous or subperiosteal abscess, or mastoid fistula, and in this case even when symptoms do not exist of a nature to compromise life.

3. When, the mastoid being normal externally, there exists a cholesteatoma or a purulent collection in the middle ear which cannot be removed by ordinary methods, and when serious symptoms arise, or if an abscess from congestion is formed in the posterior wall of the auditory canal.

4. The external surface being healthy, and in the absence of purulent collection in the middle ear, if the apophysis is the site or point of departure of headaches intolerable and persisting for a long time, against which other remedies have been employed without effect.

The operation is of doubtful expediency in chronic incurable otitis media, where signs of mastoid inflammation are wanting and there is no retention of pus in the middle ear. The operation is contraindicated when there is certainty of metastatic abscesses being already formed, or in the presence of a secondary meningitis, or of an abscess of the brain.

Conclusions.—1. The operative opening of the mastoid apophysis is a valuable remedy against some of the gravest and most dangerous diseases of the ear. 2. The danger of the operation should be considered as light in comparison with that of the disease which it is intended to relieve.—*Annales des Maladies de l' Oreille*, etc.

On Compressibility of the Brain.—Professor Adamkiewicz presented a communication to the Society of Physicians of Vienna, on compression of the brain. He briefly recapitulated the results of his former experiments concerning pressure of the brain, given in a previous lecture, then passed on to the relation of the compressibility of the nerve-masses. It is easy to prove the compressibility of the brain-matter. If one fits a piece of laminaria in the brain of a rabbit, after a few days it is swollen, and the brain-substance locally depressed. The brain, however, has remained quite normal in all its layers, and is consequently compressible. This fact is, therefore, proven. The leading authorities upon the subject teach that a tumor which generates itself in the brain causes increased tension of the cerebro-spinal fluid, and, as a further consequence, compression of the vessels and anæmia. In order to answer the questions, how do the blood-vessels act during intra-cranial tumors? and does the resulting anæmia occur through compression of vessels? he again inserted laminaria tents. This time he bled the rabbit to death, and then injected the blood-vessels. It was demonstrated that they were hyperæmic at the point of compression; also that a fluxion had afterwards occurred, on account of the paralysis of the muscles caused by the pressure. The compression of the brain-tissue therefore does not ensue at the expense of the vessels, nor at the expense of the incompressible liquor. It must be due to a condensation of the cerebral tissue itself. x.

Hydrocele in Woman.—Prof. Hennig, of Leipsic, read a communication upon this subject in the *Versammlung Deutsches Naturforscher und Aerzte*, in which he systematically considers the anatomy, etiology, clinical varieties, diagnosis, and treatment of this rare affection. He had found in medical literature forty-one cases, two of which had been under his care. Often the effusion in the canal of Nuck is complicated by protrusion of some of the viscera, which possibility must be taken into consideration. In some cases simple puncture, in others injection of iodine, was sufficient to obtain complete occlusion of the sac. Excision of part of the sac and packing the cavity with charpie, and in one case the ligatures (of iron wire), were also successful.—*Deutsche Medizinal Zeitung*, October 16.

Coffee made with distilled water is said to possess delicacy of taste, improved aroma, and, in short, is more agreeable and acceptable in every way, possibly because the distilled water does not take up any of the tannin from the berries, which ordinarily is rendered soluble by the earthy carbonates.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 13, 1884.

EDITORIAL.

DIABETES MELLITUS FROM A PHYSIOLOGICAL STAND-POINT.

DALTON'S investigations concerning the bile demonstrated the fact that this fluid is discharged into the intestine principally during digestion, while food is passing through the duodenum. It is highly probable that a similar provision for intermittent activity exists with regard to the discharge of liver-sugar into the blood passing through the hepatic vein. As this sugar, when assimilated, is directly concerned in supplying energy to carry on various activities of the body, and as these activities are not uniform and constant in their operation, it follows that there must be some nutritive mechanism which regulates the glycogenic function of the liver so as to regulate supply in accordance with demand; for it is well known that the amount of sugar in the general circulation is almost constant, the normal proportion of sugar in the blood being put down by Frerichs at 0.12 to 0.33 per cent. Recalling the statement of Von Becker, that when in rabbits the proportion of glucose in the blood exceeds 0.50 the urine will contain sugar, the question is pertinent, and has been frequently asked, What are the conditions giving rise to an excess of sugar in the blood? The answer to this will indicate in what direction we are to seek for the pathology of diabetes mellitus.

The statement is commonly made—probably in imitation of the separation of jaundice into the two classical forms of reabsorption and suppression—that diabetes may be due either to increased production of sugar by the liver, or to its defective assimilation by the various organs of the body. With regard to the latter supposition, on looking at the subject from a physiological stand-point we cannot see the slightest warrant for the supposition that glucose ever accumulates in the blood owing to defective assimilation by the tissues. On the contrary, there is a strong probability that the supply of sugar taken up by the blood is efficiently regulated in health, in accordance with the demands of the body, by a nervous mechanism acting through the vaso-motor and trophic nerves of the liver itself.

When the blood contains an excess of glucose the conclusion is at hand that the hepatic nerve-supply is in some manner disturbed, thus permitting the blood-serum to convert a greater quantity of glycogen into glucose than can be utilized in the immediate demands of the economy, and to wash the excess through the hepatic veins into the general circulation, where it acts finally as a diuretic in its escape through the kidneys. In point of fact, this hypothesis of the production of true diabetes is supported by Bernard's classical experiment of puncturing the floor of the fourth ventricle, and by various forms of nerve-injury, all of which, according to Cyon and Aladoff, are effective in causing diabetes only through paralysis of vaso-motor nerves, thus permitting a more rapid flow of blood through the glandular tissue of the liver. Moreover, it has been repeatedly demonstrated that the serum of the blood, at a moderately-warm temperature, has the power of converting glycogen into sugar. It is only necessary, therefore, to cause an increased quantity of blood to flow through the liver in order to increase the proportion of glucose in the general circulation.

An efficient cause of diabetes must therefore exist, in general, in all those agencies capable of disturbing the normal action of the vaso-motor nerves, the gravity of the disease depending directly upon the

degree and persistence of this disturbance. Diabetes appears, therefore, in certain cases of cerebral hemorrhage or meningitis consecutive to injuries to the cranium and accompanying neoplasms of the medulla. It may also appear from psychic excitation, as persistent emotion (Frerichs) or mental strain; and in certain nerve-disorders, as neuralgia, or nerve-injury. It is possible in some cases of diabetes that there may be a wide-spread degeneration of nerve-structures accompanying the rapid waste of the body and general disorder of nutrition rather than a definite local lesion. The glycosuria following chloroform-inhalation, muscular exercise, and surgical operations upon the abdomen is transitory, because the reflex vaso-motor disturbance rapidly subsides. The influence of poisoned blood in producing temporary glycosuria may be explained in a similar manner.

There is a class of cases of intermittent glycosuria in the production of which the liver may take no part whatever. Here physiology must again be called upon to elucidate clinical phenomena. Under ordinary circumstances, the lacteals principally carry into the thoracic duct emulsified fat, the capillary blood-vessels appropriating the glucose and albuminose formed in the process of digestion and absorption. A very slight alteration of conditions, and the chyle may take up an excess of glucose and deliver it into the subclavian vein without the liver ever having an opportunity of converting it into glycogen. As the total quantity of chyle, according to Bidder and Schmidt, is thirty pounds daily (or about twice the total volume of blood in the vessels), it is evident that a slight excess in the chyle would cause a very decided increase in the proportion of glucose in the blood directly after a meal. This would be more likely to occur after the ingestion of honey or maple-sugar, or of sweet fruits. The occurrence of sugar in the urine of rabbits fed upon carrots after several days' fasting might be explained in this manner.

Glycosuria may also be due to some abnormality, some unknown chemical or physical change in the liver-sugar which makes it less easy of assimilation by the tissues and more irritating to the kidneys. The glucose that occurs in the urine may not be vitally identical with normal liver-sugar and yet be chemically indistinguishable from it. Starch and glycogen are alike in chemical composition, but differ in their properties. In point of fact, this difference between liver-sugar and other varieties of sugar (including glucose artificially made from starch) was long ago recognized by Bernard.*

Several classes of glycosuric diabetes may now be recognized: first, the form in which there is a nerve-lesion more or less extensive, and whose effects upon the glycogenic function of the liver may be permanent; in this we recognize the fatal form of diabetes, which, in the absence of a better designation, might be called the *neurotic* form, or diabetes mellitus; secondly, a form in which there is a transitory nerve-disorder, whether of reflex origin or caused directly by vitiated blood, which might be termed *functional* glycosuria; and, thirdly, a form connected with chylification, which might be termed *digestive* glycosuria. Possibly, to these may be added a rare form with obscure etiology (probably, as above suggested, connected with abnormality of secretion), which might be designated *essential* glycosuria. There may be other varieties of diabetes (for instance, that accompanying pancreatic disease), but these at least illustrate the fact that glycosuria as a symptom is susceptible of several explanations, although the differential diagnosis may in some cases be practically impossible at present.

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* Leçons de Physiologie expérimentale. Paris, 1855. Page 213. Quoted by Dalton.

THE LABORS OF THE LUNACY BOARD.

WE have already had occasion to notice the success of the Lunacy Committee of the State Board of Public Charities in detecting cases of improper detention and inhuman treatment of isolated cases of insanity in different parts of the State. Although the law of 1869 placed it within the power of any individual to compel the removal of insane persons manifestly suffering from want of proper care or treatment, yet this law was seldom invoked, because it was the business of no one in particular to search for such cases, and the neighbors, especially in country districts, shrank from the consequences of reporting such cases when they were known to exist. It was only in August last that the Committee went actively to work and sent out circulars of inquiry to the physicians of Pennsylvania. As a result, they have been able to report to the State Board eighteen cases of alleged improper treatment which they had investigated, in some of which gross neglect and wanton cruelty had been practised. Several of these have been already removed to State hospitals, and new cases are constantly coming to light. Dr. Morton and the Secretary, Dr. Ourt, recently investigated four cases which had been kept chained in out-houses, like beasts, for periods of from five to sixty-five years, and took steps to secure proper care for them. In view of these aggravated instances of neglect which it has discovered, the Committee recommend the passage of a law making it a misdemeanor for any one to improperly detain or conceal an insane person of mature years.

A gratifying feature in the work of the Committee is the cordial manner in which the members have been aided in the discharge of their duty by the profession throughout the State, and the readiness with which their recommendations, as a rule, have been adopted by those having the insane in charge, which has rendered their labors much less arduous than they had anticipated.

A FATAL ENDEMIC BOWEL-DISORDER IN VIRGINIA AND KENTUCKY.

IN Southwestern Virginia and Eastern Kentucky a peculiar endemic has lately been raging, in which whole families have perished, the total mortality being variously estimated at from three hundred to a thousand. The district afflicted is about seventy by eighty miles in extent, situated on the slopes of the Cumberland Mountains in Eastern Kentucky and principally in Lee and Wise Counties in Southwest Virginia. The outbreak is attributed to a prolonged drought, which has made the water-supply low, the streams being more than usually charged with mineral and vegetable substances.

In the newspaper accounts the disease is described as having some appearances of cholera, being characterized by great thirst, cramps, frequent and profuse watery discharges from the bowels, and rapidly-fatal course, death occurring in from two hours to as many days. In Wise County, Virginia, where the epidemic is still in existence, it is said that deaths have been so numerous as to make it difficult to provide for the proper burial of the victims.

We await the medical accounts of this epidemic with interest, and hope to publish a further account of it. Possibly it may throw some light upon the pathology of the "black tongue" disease, a strange epidemic which ravaged many parts of this country from 1841 to 1846, and which was called epidemic erysipelas for the want of knowledge as to its real nature, although Bennett found that not more than one-sixth of the cases showed the customary external evidences of erysipelas.

NOTES FROM SPECIAL CORRESPONDENTS.

CINCINNATI.

IT was supposed that the inundation of a large part of our city last February would result in an increase of sickness. This has not been the case. On the contrary, the health of the city has never been better than during the summer and up to the first of the present month. This condition may be partly due to the general cleaning up which followed the flood throughout the entire submerged district.

Within the last month, however, there has been an increase in sickness, and two weeks ago the death-rate from natural causes was higher than it has been since the smallpox epidemic of 1882.

Diphtheria and scarlatina prevail in almost an epidemic form in some quarters of the city. The central part of Walnut Hills is especially affected, where the drainage is bad and efficient sewers have not yet been constructed. A number of the students of Lane Seminary, situated in central Walnut Hills, have been affected with what in some cases was pronounced diphtheria and in others tonsillitis, the diseases seeming to be not easily differentiated. The fact that scarlet fever and diphtheria are raging in the same quarters at the same time may lead to some interesting facts as to their relation.

The medical colleges are all complaining of a comparative dearth of students. This is possibly due to the financial distress under which the whole Western country is laboring. Many one- and two-term undergraduates are practising medicine in remote country districts in order to earn money to take them through college.

The Ohio Medical College, being the largest, suffers the most, the shortage, compared with the last half-dozen years, being perhaps twenty per cent. In this college there have been no changes in the regular faculty. Among the new assistants, Dr. David Debeck, Professor Seely's assistant in the Eye and Ear Clinic, has been doing some very good work. Fresh from a course in the German universities, he is rendering valuable service to the clinic, and has infused new life into the private courses of that department. Dr. Roeder, the late demonstrator of chemistry, having during the summer died of apoplexy, Dr. W. S. Christopher has been appointed to fill his place, which he does with marked ability.

The Miami College has almost the usual number of students, although the number of late arrivals is not so great as usual. Dr. Clendennin has been made dean of the faculty instead of Dr. John Murphy, and also fills the chair of surgery left vacant by the removal of Dr. Kearny to Knoxville, Tennessee. The city, no less than the college, feels the loss of Dr. Kearny, who is not only a skilful surgeon, but also a perfect gentleman. The chair of anatomy vacated by Dr. Clendennin has been well filled by the appointment of Dr. F. W. Langdon, of some considerable celebrity as a field naturalist and comparative anatomist, as well as a rising physician. The faculty is certainly strengthened by this addition. Dr. Langdon's place of demonstrator of anatomy has been filled by Dr. Eric E. Sattler. Dr. W. A. Rothacker, Pathologist to the Cincinnati Hospital, has been made Lecturer on Pathology, since which time this ordinarily dry subject has become the most interesting one in the whole course.

The Board of Health is now wholly in the hands of non-professionals, and its work is not nearly so satisfactory as when the health officer was a physician. The sanitary condition of Cincinnati, taken as a whole, was, perhaps, never worse, and there seems to be no prospect of a change before the next spring.

A. B. T.

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PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a meeting of the Society held October 8, 1884, Dr. William M. Welch, President, in the chair, Dr. J. V. Crandall read a paper upon "Croup," in which he urged a more careful diagnosis between this condition and diphtheria, and advocated tracheotomy, and reported eight cases in which it had been performed, with five recoveries.

DISCUSSION ON CROUP.

Dr. J. Solis Cohen, in opening the discussion, said: The principal impression gained from this paper is the importance of tracheotomy. As regards the identity of these diseases, while I contend that there is a difference, I am not prepared to recognize so great a difference as is claimed by the reader of the paper. Croup and diphtheria do not present in the alleged proportionate frequency. True membranous croup is a very rare disease, and that is the reason so many disbelieve its existence. The series of successful tracheotomies reported by Dr. Crandall is very remarkable, and I trust that in future his success may continue to be as great. It is certainly greater than any that has been reported in this or any other city probably in the United States. Some years ago (1873) I prepared a paper for this Society, in which the results of more than five thousand cases were given. The proportion of successful operations was about one in

four. Before that paper was presented, operations had been rare in Philadelphia; since then they have become more frequent. The ratio of success is not always maintained in one's later experience. Thus, the late Dr. Hodge, who at one time reported four cases, three of which recovered, told me that he had subsequently operated seven times in succession without another recovery. Dr. Jacobi, whose success had been exceptionally good at one time, informed me some years afterwards that he had been so unfortunate as to lose one hundred cases in succession, and thus his early confidence in tracheotomy has been modified.

The reason for this variation of results is, I think, plain. We are careful of our first cases. We see them frequently after operation, just as the writer of the paper has done. When we become older, this time is not at our disposal. The after-nursing I regard as of the very highest importance, and I have long made it a rule never to operate unless sure that this will be properly attended to. The time for operation is a question of great moment. The best rule is to operate as soon as the thought of the necessity comes into your mind. Success depends on early operation, other things being equal. The tube appears to me to be a necessity. To dispense with it I regard as dangerous, notwithstanding it is thought by some to produce irritation and thus favor the deposit of new membrane. A few years ago, impressed with the encomiums of Dr. Martin, of Boston, I adopted the plan of keeping the edges apart by ligature without a tube; but inattention in nursing allowed the opening to become so frequently occluded by the soft parts, in the motions of the child, and suffocation, fortunately overcome at the moment, having ensued on one occasion, I have felt no desire to repeat the experiment.

Steam in the room and the maintenance of an equability of temperature are important. If I had but two things to depend upon in croup, I would choose vapors from slaking lime. But a small piece in a pan of water upon the stove will not answer. Copious disengagement of vapors is needed, just such as were produced by the ignorant Irishman mentioned in the paper. I have no notion that the action of the lime is chemical, although I am aware of its slow action on membrane in a test-tube. I believe that it acts mechanically. Small particles of lime are carried up with the vapor of water; these get under the false membrane, which does not everywhere hug the tissues closely, and act as minute wedges; the accompanying vapor of water follows and detaches the products.

I believe that I have seen life saved more frequently by lime used in this manner than by tracheotomy. Dr. Crandall has been fortunate in braving the contingencies that surrounded some of his cases. There are very few men brave enough to operate without adequate assistance, and with the light furnished by an uncertain lamp. Anomalous blood-vessels often give unexpected trouble.

As regards the point of incision, my own plan has been to perform the low operation; that is, the one below the isthmus of the thyroid gland. A larger tube can be inserted there, and the wound is farther from the seat of disease. It is true this is the more difficult operation, but there is no occasion for a hurry, unless immediate death is threatening. The ten or fifteen additional minutes required for a deliberate operation steal nothing from the patient's chance of life. In an emergency of course there is no choice. All the tissues may have to be incised in one cut. Another fact rendering the lower operation more favorable is the lessened liability of coming directly upon masses of pseudo-membrane which may be forced down the trachea in the very act of incising it.

An important point, too, not appreciated by the majority of operators, is that this false membrane is a foreign body, and should be removed. The first thing to be done after the trachea is opened is not to put in the tube, but to make a thorough search for false membrane, and to remove all within reach. Then the edges of the cut should be kept asunder and cough be excited to drive more out. If this were done more frequently, the statistics of recovery from the operation would be much more favorable.

We sometimes have hemorrhage to deal with. The best method to treat this is to plug the wound about the tube with absorbent cotton. Never hunt for the vessels; pressure gives the best results. The character of the tube is important; these are often found made of hard rubber, but I do not consider such material desirable. It is thicker than silver, thereby lessening the calibre, and does not tarnish when the wound goes wrong; and this latter characteristic of silver tubes is frequently of service. The tube should be of equal calibre throughout, and not made tapering, so that the patient may get all the air he is supposed to get.

In answer to an inquiry from Dr. H. R. Wharton as to his use of chloroform, Dr. Cohen replied that the operation was made easier by anæsthetics, but the safest plan is not to use them. Ether is out of the question if ordinary artificial light be close. The patients were usually numb and insensitive from impending carbonic acid poisoning, and when retaining sensibility often seem to understand the purpose of the operation, and do not struggle. Struggling should be prevented by wrapping the trunk and limbs in a sheet or a towel.

Dr. H. R. Wharton: I agree with Dr. Cohen, that the results of Dr. Crandall's

operations have been remarkably successful. The results of my own cases have been fairly encouraging.

As to the two diseases under consideration, I believe in their non-identity. With Dr. Cohen, I am opposed to the use of an anæsthetic in the operation of tracheotomy, and believe that I have seen two cases lost through its use. The after-treatment of cases of tracheotomy, when performed for croup or diphtheritic croup, is most important, and I consider a moist atmosphere very necessary in these cases. At the Children's Hospital, in this city, we have a room especially fitted up for tracheotomy cases, which can be readily filled with the vapor of steam from steam-heating pipes. The permanent removal of the tracheotomy-tube has, in my experience, often been a matter of greater difficulty than its original introduction. I recently had a case in which the tube was removed on the thirteenth day; the condition of the patient was good, the temperature and pulse being normal. An attack of dyspnœa supervened two hours after the removal of the tube; the gentleman left in attendance was unable to reintroduce it, and when I arrived the child was dead. I have performed tracheotomy five times for diphtheritic croup, with two recoveries; one of the fatal cases was the one just alluded to, which died on the thirteenth day after the operation, from an accidental cause.

Dr. J. M. Barton: I regret that Dr. Cohen has not given a more definite rule "when to operate" than "when you begin to think of tracheotomy, then is the time to do it." As soon as you make a diagnosis, and perhaps before you make a diagnosis, of membranous croup, you think of tracheotomy. I was called in two cases lately by recent graduates to perform tracheotomy in croup. Doctors, parents, and friends were all urgent for immediate operation; they were evidently under the impression that it meant without operation certain death, with operation instant recovery; the cases were not urgent, they both had croup, but there was no important obstruction to respiration; under careful treatment, which had been neglected, they both recovered without tracheotomy. My own rule has been, when the tissues just above and just below the sternum decidedly recede during inspiration, when the face becomes slightly livid and the respiration hurried, with the usual symptoms of croup, the time to operate has arrived.

I have not found ligatures of much use in keeping the wound in the trachea open. In operating low down in a young child, with small and deep trachea, the ligatures pull directly towards the surface. A probe bent into a circle and a hook fashioned on each extremity will keep the wound open by its spring, until a properly fitting tube can be obtained.

Is it desirable to operate *in extremis?* I have operated on several such cases in which artificial respiration had restored them, but they all perished in from one to three days.

Dr. Nancrede: I have been much interested in the excellent paper read by Dr. Crandall, but dissent from the evident impression intended to be conveyed by the writer, that tracheotomy is a trivial operation and one which may be undertaken without any hesitation. I am not ashamed to rank myself with those surgeons who dislike such operations, especially when so bold a one as Billroth says that he blames no surgeon for declining to perform laryngotomy on a young child. This may seem exaggerated language, but although in the majority of cases the operation is a simple one, yet it may demand all the surgical skill and nerve that the surgeon is possessed of, as in the last tracheotomy I performed. Two cases have been related this evening in which death occurred during the operation by most competent operators. Billroth has had a similar experience, and I know of a number of others.

An otherwise good, general practitioner, with a previous hospital experience, sent for me on one occasion, saying that he had opened the trachea, but could not introduce a tube. Upon examination, I discovered that he had sliced off a portion of the right ala of the thyroid cartilage, but had failed to open the trachea at all. Other operators had cut either the normally or abnormally placed carotid artery, or had dissected between the trachea and the carotid artery until they had reached the vertebræ. Other accidents have also happened, which should make us pause, while we recall the fact to mind that if we do not get through the operation successfully we kill our patient. I cannot resist the impression which my experience has produced, that diphtheria and pseudo-membranous croup are identical diseases, modified by their locality, rapidity of progress, etc. Diphtheria is said to be distinguishable from croup by the presence of albuminuria, but German investigators have shown that albuminuria exists in a distinct proportion of cases of so-called croup. Besides, most croup cases *die* before this symptom can make its appearance. Moreover, all cases of undoubted diphtheria do not present at first, or at any time, those profound alterations of the blood and the kidney-lesions which result in albuminuria.

Finally, whether the diseases are identical or not, clinically it is generally impossible to distinguish them at the time of operation. I may refer to a series of cases in my own practice, which would have been decided by any member present as typical cases of true croup, which yet, by their subsequent course—even diphtheritic paralysis—or their marked contagiousness, proved to be undoubtedly diphtheria. The difference in character of

the false membrane in the pharynx, larynx, and trachea seems to be relied upon by some of the speakers as a proof of the essential difference of the two diseases. Precisely similar conditions are found in undoubted diphtheria, and are explainable on anatomical grounds, so that the membrane of croup and the membrane found in the trachea in undoubted diphtheria are identical in appearance, etc., being in the substance of the mucous membrane *in the pharynx*, but upon its surface in the trachea. There are many other similarities, but time does not permit them to be referred to.

As to when to operate, croup cases are divisible into two groups,—viz., those in which the dyspnœa is subject to violent exacerbations, but is slight during the intermission; and those which steadily increase, each paroxysm being succeeded by a relative intermission only, the dyspnœa steadily increasing. In the first class of cases the patient may, it is true, die in an access of dyspnœa, but there is time to try medical measures usually. In the second class, when there is marked depression of the epigastrium and base of the chest, and also of the episternal and supraclavicular fossæ, despite the persistent use of the admirable treatment suggested by Dr. Cohen, operate at once.

Personally, I prefer to operate without ether, although it is harder for the operator, unless the patient has become insensible from carbonic-acid poisoning.

The fenestræ generally found in the tubes I regard as ridiculous. They are generally to be found outside the trachea when the tube is in place.

There should be no hurry in doing tracheotomy. Both hurry and force are exceedingly dangerous, and kill the patient sometimes. A hurried operator may force down the membrane before the tube; the trachea, being more resistant, may be cut, while the membrane will give before the knife, if the latter has been dulled. Some form of dilution had better be used to permit the removal of loose membrane, etc.

[Subsequently Dr. Nancrede said, in answer to Dr. Stewart, "I am aware that diphtheria is a disease of asthenic character, but I deny that it always commences as such, especially in the larynx, and inquiry will often develop the fact that there has been an attack of pharyngeal diphtheria precedent to the croup."]

Dr. W. S. Stewart: I have been very much interested in hearing the discussion this evening. I remember hearing a paper read before this Society some time ago, in which the necessity of early operation in croup was urged. But the reader of that paper, when interrogated as to his success in his operation, had not had one recovery. In the paper of this evening there is a large proportion of recoveries. The contrast between the two papers reminds me of a little experience when I went with a brother physician, who had a subject, as he thought, necessitating an operation as a *dernier ressort* for croup; the parent of the child refused to permit the operation, as soon as the arrangements would be made; and so fickle-minded was he that three unsuccessful attempts were made to perform tracheotomy during an interval of two days, and still the child recovered without the operation. The difficult problem to solve is the mortality that would result from not operating, and the actual lives saved by operating.

I have no hesitation in maintaining that croup and diphtheria are distinct diseases.

I confess I have not had the experience of the last speaker in seeing a case of diphtheria develop and terminate fatally in a few hours. And I could not account for such results, except in the fact of its being an insidious development, and in its asthenic nature giving no special symptoms for a certain interval of time at first except the feeling of languor and an unaccountable sensation of lassitude. Croup, on the other hand, is a sthenic disease, is ushered in suddenly, and is always accompanied by a cough of a peculiar and characteristic sound. The membrane of croup is lighter in color than that of diphtheria, lies more on the surface of the fauces and trachea, and is more readily expelled by coughing, whilst the germs which enter into the formation of the diphtheritic membrane embed themselves within the tissue, and are of dusky hue, and with greater difficulty removed; it is not accompanied by a cough.

Dr. Jas. F. Stone: There is one point that I would like to emphasize, and that is the vital importance of attending the patient carefully after the operation. I am one of those who believe in the necessity and very great advantage of this operation, and in its early performance; and yet I do not believe it should be performed unless the physician will devote a proper proportion of his time to the after-treatment. When we consider that the operation is of a character that does not relieve the physician of his responsibility, but even makes it greater, we should be willing to devote days, and possibly weeks, to its proper performance.

Dr. Sajous: In a case which I saw to-day, operated upon by myself two weeks ago, I noticed that a peculiar odor accompanied each expiration, and, upon examination, found a spot of ulceration just opposite the fenestra (this being rather low down near the tracheal aperture of the instrument), upon the posterior wall of the trachea. I consider the fenestra as useless. The distance between the tube *in situ* and the wall of the trachea is sufficient for the passage of air, and when the voice can be used the tube does not offer enough interference to prevent the formation of the voice.

Dr. Formad: As to the misconception be-

tween croup and diphtheria; some gentlemen have expressed an opinion that there are different pathological processes in the two. Pathologists never asserted that the two diseases are clinically identical, but only that the pathological process is identical. If the product is different, it depends on the locality affected. We may have a urethritis or a cystitis; the diseases are different, and the symptoms different, but the pathological process is identical. It is nowhere said, in textbooks of pathological anatomy, that croup and diphtheria are clinically, or even anatomically, the same.

In diphtheritic angina the deposit is deeply seated because the inflammatory exudate cannot get outside on account of the anatomical construction of the mucous membrane of the pharynx. In the larynx and trachea the exudate cannot stay below, it being expelled by the elastic tissue of the mucous membrane, which, moreover, has but one layer of an easily-permeable epithelium. The exudate is bound to get out as soon as formed. We may have similar exudates in any surface of the body, in each case the deposits differing with the local conditions. Virchow has well expressed these differences: diphtheria is "eine Einlagerung," croup is "eine Auflagerung," of the exudate.

In croup the absence of constitutional symptoms is easily explained. While in diphtheritic angina the deposit is embedded into tissues rich in lymphatics and blood-vessels, and death ensues usually from absorption of septic materials, in croup the deposit lies on the outside of the body; death may ensue from stenosis of the larynx or trachea, but not from absorption of septic materials, as there are but few blood-vessels and lymphatics in this situation. The anatomical difference fully justifies a clinical differentiation. The deposit of the exudate is like a nail, which may lie on the table or may be driven into the wood. The nail is the same in each case, but is under different conditions and has different effects.

Dr. Crandall, in closing the discussion, said: Dr. Cohen has referred to Dr. Jacobi's low percentage of cures latterly. Dr. Jacobi doubtless operated as scientifically and skilfully in his later as in former cases. So also does Dr. Levis; yet he reports many failures. I do not lay claim to great scientific accuracy, but wish to demonstrate the importance of after-treatment. The children averaged from three to four years of age, and this made it easier of performance in the cases given. I saw one of these cases every two hours, the other every four or five hours, and believe success due to this. I also believe that physicians should be able to perform this operation whenever called upon. I am under many obligations to those who have assisted me, this evening, in establishing the differential characters of these diseases.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held November 20, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Dr. A. C. POST presented a new hard-rubber syringe for injection of the bladder and abscess cavities.

THE SURGICAL MANAGEMENT OF RACHITIC DEFORMITIES OF THE LOWER EXTREMITIES.

Dr. V. P. GIBNEY read a paper with this title, and said that by the term surgical management he wished to convey the impression that mechanical appliances, as well as cutting instruments, were surgical means for effecting relief. Despite the teachings of gentlemen who practised osteotomy, he was convinced that the bulk of the profession was of the impression that it was not every case of bow-legs and knock-knee which demanded surgical interference. He therefore raised the question, What cases can be safely left to nature? If he should state that many children recovered from deformity without any treatment whatever, he would be met by the statement that they did not have true bow-legs or knock-knee. The author then gave the definitions of these terms by Macewen, Little, of London, Poore, of New York, and others. But it was well understood by practitioners what was knock-knee, and it was his strong conviction that a fair proportion of knock-knee in children in the United States made a spontaneous recovery.

From 1871 to 1877 he saw at the Hospital for the Ruptured and Crippled two hundred and fifty-five cases of genu valgum in children under fourteen years of age. This represented a period when the apparatus for the relief of the deformity was theoretically inoperative, although practically it seemed to be of benefit. The patients wore the springs from six to eighteen months, and in nearly all the limbs were restored to their normal condition. Another reason for believing that many spontaneous recoveries took place was the scarcity of cases in the adult in this city. The large majority of osteotomies in this city were upon children from three to eight years of age. From 1871 to 1877 he saw only eighteen cases in patients between fourteen and twenty-one years of age, and only three in patients over twenty-one. Of the entire number treated at the hospital, two hundred and seventy-six, only fifteen were not cured, and these fifteen occurred among the twenty-one cases over fourteen years of age.

As to bow-legs, during the period of seven years prior to the introduction of osteotomy he saw at the hospital one thousand and five cases, nine hundred and ninety-seven of which were in children under fourteen years of age. He saw only three in adults, and

five in persons from fourteen to twenty-one years old. The large proportion of the nine hundred and ninety-seven came under treatment, and a good proportion never carried out the same. Their ages ranged from two to four years. Either the apparatus was very efficient or the limbs became spontaneously straight. The large majority of those operated upon in this city since 1879 doubtless were under seven years of age. It was very rare to see an adult American affected with bow-legs.

In answer, therefore, to the question, What cases should be left to nature? Dr. Gibney said that children under two years of age presenting bow-legs or knock-knee should not be subjected to apparatus or mechanical treatment unless the deformity be very exaggerated. Children under three years of age, with only a moderate degree of deformity, could, in his opinion, be safely left to nature.

In bow-legs we often had a general curve extending from the perineum to the ankle without any sharp deviations whatever, and again in many cases there was a sharp curve in the tibia and fibula at the junction of the lower and middle thirds. In the former cases he rarely found it necessary to employ any form of apparatus, while in the latter he rarely omitted to order an apparatus.

Knock-knee and bow-legs being more or less due to rickets, diet and general hygiene had much to do in the treatment. Many cases were cured on being sent to the country. Phosphates of lime and soda only acted upon digestion.

He practised manual force in these cases if the patient's parents were unable to buy apparatus, or were too improvident to give attention to its care, and in cases where one had little time in which to effect a cure; also in cases in which the bones would yield to the force, the other two conditions being present.

The author quoted with approbation from Macewen, who said that it might be safely concluded that *ostéoclasie manuelle* had served its time and could not be practised in the presence of the more exact methods of to-day. Among the more enthusiastic advocates of gradual correction of these deformities by apparatus was Little, of London. Even surgeons who favored osteotomy admitted that the age at which the bones yielded to force was the age for the use of springs. His own rule was to employ manual force if the bones would comparatively readily yield thereto. If he found the femur curved and the inner condyle unusually long in a case of knock-knee, he tested with his hands the ligaments of the knee and the femoral curve, and was guided in his selection of cases for the use of an apparatus. The age beyond which this test failed was from four to five.

All the springs now in use were constructed on one principle,—namely, to bring force to bear against the convexity at its apex. One class of springs was intended to exert moderate but continuous pressure, while another exerted momentary pressure. Of the latter method Dr. Shaffer was an advocate.

Osteoclasis certainly had not become popular in the United States, notwithstanding the excellent results obtained with it by Robin, of Lyons, and others across the ocean.

As to osteotomy, Macewen stated at the International Medical Congress at Copenhagen that, out of eight hundred and twenty personal cases of supra-condyloid osteotomies, there were only eight cases in which suppuration occurred; hemorrhage occurred in one case. Five died, but death was not due to the operation.

Dr. Gibney remarked that he had never seen an anterior tibial curve corrected by an apparatus. During the past six months he had performed nine linear and two cuneiform osteotomies at the Polyclinic, sending the patients home as soon as the plaster of Paris hardened, and in none had the temperature risen above 102° F. In one case of supra-condyloid osteotomy there subsequently occurred paralysis of the external peroneal nerve of two months' duration, due probably to callus.

From his operations Dr. Gibney had learned the following lessons: first, exaggerate the correction of the deformity; second, examine the limb at the end of a week, to ascertain whether the amount of correction gained was the amount desired; third, do not hesitate to refracture by manual force if it be necessary; fourth, with strict attention to details in operating and in the use of good plaster-of-Paris bandages well applied, cases could be treated in dispensaries nearly as well as in hospitals; fifth, in dispensary cases do all the operating at one sitting.

Dr. Gibney was still convinced that one lost nothing in observing Listerism as closely as possible.

DISCUSSION.

Dr. JOSEPH D. BRYANT agreed with the author of the paper, that many cases recovered spontaneously. He referred to the alleged causes of bow-legs, as weight of the body, muscular contraction, sitting with the legs crossed. The fact that many cases did not recover if left untreated raised the question whether any cases ought to be left to nature. Much was to be gained by good hygienic management. As to treatment, if he found the bones springy, he applied force to the greatest angle of convexity two or three times weekly. He believed, with Dr. Gibney, that every case which could be affected by moderate, or even a greater, degree of force, was suitable for treatment by an apparatus, and he favored a spring which was not sufficiently powerful to do injury to the soft parts. Osteoclasis had been used but little in this city, and he would not be willing to apply it near the joint. He looked upon

osteotomy as one of the most important branches of surgery during the present century, especially if combined with antisepsis. He had yet to experience any ill result following the supra-condyloid or tibial operation. He had not even had a drop of pus associated with the operation. He related a case illustrating the advantages of antiseptic precautions. The oldest patient upon whom he had performed the supra-condyloid operation was sixteen years of age, and in that instance there was a temperature of 102° on the third day, and later another slight increase, but no local condition was the apparent cause, and the patient made a good recovery.

Dr. C. T. POORE would confine his remarks to a few points. First, it seemed to him important to know what was the exact pathological condition back of knock-knee, otherwise we would have no good basis for treatment. There were many cases in which there was apparent knock-knee, but in which there was no real bone lesion. In all cases in which there was a bone lesion, the cause he believed to be rickets. Traumatic cases were excepted. That being true, what should be the treatment? There was no question that in the early stage of rickets, before consolidation had taken place, the bones could be bent. He could not understand, however, how the limb could be straightened by mechanical force after consolidation had taken place. Dr. Gibney had seen spontaneous cure from knock-knee of true bony origin, and his word was to be accepted without question, but Dr. Poore thought the cases could not be numerous in which a cure was effected without treatment; at any rate, he had not seen any. He thought knock-knee of rachitic origin was much more common now than a few years ago in this city, and the fact that there were but few adults suffering from the deformity was due to the comparative freedom from the affection in this country. If taken in time, the cases could be successfully treated by properly-applied splints. If no benefit followed after a certain length of time, he could not see what further was to be gained by the continued use of splints. If you could not correct the deformity while the bone was soft, you certainly could not after it had become hard. The age at which the bone became hardened was a question of nutrition, and varied in different children. After the bone had become hard an operation was called for. As to osteotomy, he would add nothing to what had been said by the author of the paper, except that in most of the cases in which hemorrhage had occurred this might have been avoided. He had never kept a patient in bed more than five weeks. His rule was to remove the plaster of Paris on the fourth week, and within a few days the patient would be out of bed. He had never had a recurrence of the deformity.

With regard to osteoclasis, he thought it far better in bow-legs than manual force, as the fracture could be produced at any desired point if sufficiently far from the malleoli. He had never seen any accident of any kind result from osteoclasis, nor had he ever failed to correct the deformity. He thought long curves were better treated by osteoclasis, while short, angular curves near the epiphyses and anterior curves were better treated by osteotomy. He did not employ Listerism, strictly speaking.

Dr. M. H. HENRY said that for many years at the Immigrants' Hospital they had many children of foreign birth. There were few Italian children who suffered from deformity of the lower extremities. Most of those who were deformed were rachitic, and, with better diet, better bedding, and better clothing, they almost invariably recovered with little or no surgical treatment. The limit of their stay at the hospital on the island was five years.

Dr. M. JOSIAH ROBERTS, in speaking of the comparatively few cases of bow-legs and knock-knee in the adult in this city, said it should not be forgotten that the death-rate in children was greater than in more mature life, and this was especially so among those suffering from a constitutional dyscrasia. Moreover, recovery from these deformities was not usually absolute, but one of degree. He could point out many cases of bow-legs of moderate degree among the pedestrians of Fifth Avenue, and it would be found that persons thus deformed were incapable of prolonged locomotion or of standing for a considerable period of time. While he agreed with the author of the paper that there were many spontaneous recoveries, he wished to emphasize the fact that many cases of so-called complete recovery were recoveries only of degree. He showed photographs in illustration of this statement.

Dr. Roberts differed from the author in the view that the deformity in bow-legs pertained to the entire limb. Photographs of the bones with the flesh removed showed that the shaft of the femur and tibia was nearly or quite normal in shape, and that the deformity existed rather in the joint and the junction between the epiphysis and diaphysis.

As to what cases should be left to nature, while he believed with the author that many cases recovered spontaneously, he thought the surgeon could aid nature in every case, and shorten the period of cure. Manual force had a very limited application, being justifiable only in cases in which the bone was quite soft. There were different mechanical appliances which had proved of benefit, and among others was one by Dr. Davis, the founder of orthopædy in America, a description of which the speaker gave. He also called attention to the importance of instruments of precision in determining the exact degree of the deformity, and said that

without such measurements a general statement of a surgeon that his patient had entirely recovered was not of much value.

Dr. Roberts regretted that the author had not dwelt longer upon the subject of the best means for doing osteotomy. This question could not be considered as settled so long as surgeons continued to employ chisels for the division of hard bone, which, under the most favorable circumstances, was very difficult to divide in this manner, and, in the living subject, involved danger to the soft parts. He then described his electro-motor, the cutting apparatus consisting of a circular saw, which could be made to divide the hardest and largest-sized femur within three seconds. By protecting the soft parts with broad retractors, the most bungling operator could not do any injury with the instrument.

Dr. HOPKINS referred to a case of exsection of the knee-joint for knock-knee not of rachitic origin.

The PRESIDENT inquired as to the influence of sex as affecting the frequency of rachitic deformities of the lower extremities, and also as affecting spontaneous cure. He asked the question because it had often occurred to him to have anxious mothers express great solicitude for their little girls affected with bow-legs.

Dr. GIBNEY, in closing the discussion, said that, so far as he could recollect, the figures at the Hospital for the Ruptured and Crippled showed about an equal number of cases in the two sexes, with about an equal number of spontaneous cures. A great many women who had suffered from bow-legs during early childhood would be found to have flat-foot. He thought a good many of the adult cases seen in this city were not cases of knock-knee of the kind treated of in this paper, but occurred in stout men, and were of an atonic type, as described by Little.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

AN adjourned annual and a stated meeting were held November 24, 1884.

The retiring President, Dr. S. O. VAN DER POEL, read his address, in which he referred with approbation to the amount and quality of the work done by the Society during the past year, to the large increase of membership, amounting to one hundred and twenty-seven additional members since the last annual meeting, and returned his heartfelt thanks to the Society for the uniform courtesy which he had received at its hands during his term of office. He recommended that essayists seek to elucidate some particular point, either controverted or in need of fuller investigation, in the large field of medicine, and that those who partake in the discussion make their remarks relevant to the questions raised in the paper, and present their views in concise language, thus avoiding the emptying of benches by rambling debate.

The President for the ensuing year, Dr. DANIEL LEWIS, then called the stated meeting to order, and, after paying a eulogy to the retiring President, Dr. Van der Poel, and promising to advance as far as possible the interests of the Society which had conferred upon him the honors of its chief office, referred to the importance of all physicians who wished to take part in framing laws relating to the medical profession in the county and State joining the county medical society, and said that the law of 1880, regulating the practice of medicine in the State of New York, had proved far more reaching and effective than even its framers had anticipated. The necessity for a State Medical Examining Board was obvious as a means of suppressing quackery and promoting a higher grade of medical education. Such a board, however, should it be organized, as it was probable it would be in the near future, should have power to revoke a license to practise, if sufficient grounds for doing so were presented. He also thought it might add to the scientific interest of the meetings if the gentlemen expecting to take part in the discussion of any given paper would send their names to the Secretary, that the fact might be made known on the cards of announcement. He recommended timely measures against the possibility of an epidemic of cholera. The donation which the College of Physicians and Surgeons had lately received from Mr. Vanderbilt would probably soon lead to a change of location of that college, and he therefore thought it advisable that the Society procure at an early date another hall in which to hold its meetings.

Dr. Lewis then announced the following members of committees for the ensuing year: On Hygiene, Drs. Stephen Smith, Alexander Hadden, E. H. Jones, Cyrus Edson, William L. Hardy; on Ethics, Drs. George A. Peters, W. T. Alexander, Mark Blumenthal, C. C. Lee, Edward Waitzfelder; on Prize Essay, Drs. F. R. Sturgis, Frank P. Foster, W. R. Birdsall; on Auditing, Drs. P. Albert Morrow, Gorham Bacon.

On motion of Dr. VAN DER POEL, that portion of the address relating to obtaining a suitable hall for the Society was referred to the comitia minora.

ON THE THIRD STAGE OF LABOR.

Dr. SIMON BARUCH read a paper with this title, and said that his reason for so doing was that experienced and learned obstetricians were still at variance as to the proper method of conducting the third stage of labor. He then briefly referred to the common division of labor into three stages,—the first, second, and third,—which he accepted. In general terms, it might be said that, in proportion

as labor advanced, was any deviation from the normal processes dangerous to the mother. With the advent of the third stage, the patient was ushered into a condition in which the perils from abnormal processes culminated. Here attention to details which in themselves might seem insignificant was all-important for the preservation of the woman's health and preventing the destruction of human life.

There were three methods of dealing with the placenta in vogue at present. The first was the ancient method of pure expectancy; the second method consisted in active assistance in the removal of the placenta, and had as outgrowths the Dublin, and later the Crédé, methods; the third, or eclectic, method occupied a middle ground between the extremes of expectancy and energy of procedure. The author thought that in this department of medical art, as in all other departments, the golden mean was to be desired. He then quoted the views of various authorities, European and some American, with regard to the value of these several methods, particularly the expectant and Crédé's, and showed that many of those who professed to practise Crédé's method failed to do so in fact. Reliable statistics of cases treated according to the expectant plan and the method practised by Crédé showed the advantages of the latter.

It probably has been the experience of every obstetrician to have met with cases in which the placenta has been retained within the vagina, perhaps, for two hours without doing any harm, but it seems unreasonable to maintain that it was of any advantage to have the membranes retained for a length of time in this locality. The author had had but a single case in which the placenta had been unduly retained within the uterine cavity. He thought that many lives had been lost by waiting for the uterus to expel the placenta of its own accord after an abnormal and a protracted labor. Every case should be treated according to its own peculiar surroundings. It could be of no advantage to leave a woman lying hour after hour in her own gore, in anxious suspense and great discomfort, waiting, with the idea that we are giving nature fair play for the expulsion of the placenta. The eclectic method seeks to make use of all the advantages possessed by Crédé's, while omitting any of those measures which it might be well to discard.

The author then referred to the twofold power of contraction possessed by the uterus, the one being tonic and the other clonic. The latter alone constituted a true uterine pain. The former was illustrated during uterine involution after delivery. These clonic spasms for the expulsion of the placenta, or the third stage of labor, might be modified and rendered more or less abnormal by one or more unnatural conditions, as social surroundings, peculiarities in the second stage, the use of chloroform during labor, the tendency to hemorrhage.

The author spoke of his experience in midwifery among the colored people of the South as compared with that among the higher classes of the metropolis. In the woman of high social position many hours usually passed in what were called preparatory pains, and by the time the second stage had been reached the nervous system was in a high state of reflex irritability, the expulsive contractions were not so steady and forcible; and here the author believed existed a cause of rupture of the perineum, as during the last four years of his obstetric practice, which had been in the city, he had seen more cases than during his fifteen years' previous practice in the South. In the negress he often found the placenta expelled into the vagina very soon after delivery of the child, while this was seldom the case in the city woman. In the latter class of cases haste in the third stage of labor was strictly to be avoided; perfect rest under proper surveillance was the true course. Injudicious friction or pressure would cause undue uterine irritability and fail of the desired object,—viz., to obtain strong expulsive contraction.

The fact that chloroform had been given indicated that the uterine powers had been reduced; clonic contraction-power of the organ, which was necessary for the expulsion of the placenta, had been diminished. He would therefore recommend that the anæsthetic be diminished as the third stage was approached, and that Crédé's method be aided by the Dublin method of following the uterus down with the hand. When there was a tendency to hemorrhage, Crédé's method alone could not be relied upon: the uterus should be followed down as the child receded from its cavity, and should not be permitted to pass from under the hand. The method which he adopted, doubtless, was that practised by many other physicians, consisting in gently stroking the uterus to stimulate it to contraction, of grasping the uterus with the outspread fingers, intensifying the strength of the contraction, and making downward pressure for the purpose of aiding in expelling the placenta out of the vagina or vulva. It might be necessary, in some cases in which the placenta was grasped by the neck of the uterus, to make traction upon the cord, or to insert the disinfected fingers and make direct traction upon the placenta itself. It was his custom to place the two fingers of the right hand within the vulva, while the uterus was being compressed with the left hand, in order to guard against too forcible expulsion and rupture of the membranes. The author regarded twisting of the membranes as objectionable, as it was liable to excite too energetic contraction and rupture of the membranes.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held November 26, 1884, GEORGE F. SHRADY, M.D., President, in the chair.

OS COCCYGIS REMOVED BY OPERATION.

Dr. JOHN A. WYETH presented the coccyx which he had removed from a man, 36 years of age, who four years ago sustained an injury by falling backwards on the ice. No symptoms were noticed at the time of the fall, but a few months later the patient was seized with spasm of the sphincter ani muscle, which condition grew worse and led to two operations for fissure of the anus, the first operation being by the knife and the second by stretching of the sphincter. Dr. Wyeth recognized displacement of the coccyx by the fact that the stools were flattened and grooved, evidently due to some obstruction. Later he operated upon the same patient for inguinal hernia by Heaton's method. The patient was still a monomaniac, but Dr. Wyeth thought there would finally be entire cessation of the symptoms.

MODIFICATION OF OTIS'S URETHROTOME.

Dr. WYETH also presented Otis's urethrotome, which he had so modified that, when cutting through even the densest tissue, the extent of the incision could be restricted within absolute limits.

Dr. PEABODY had, during the past summer, removed the coccyx in a case of coccygodynia without giving relief to the symptoms, but the woman was afterwards cured by measures directed against neuralgia.

Dr. J. P. GARRISH had cured the symptoms in several cases of injury to the coccyx by dividing the nerve-supply along the surface of the bone.

Dr. W. M. CARPENTER said that Dr. Goodell, after operating upon cases due both to injury and to neuralgia, had reached the conclusion that in cases of coccygodynia the operation which promised the best results was removal of the bone, whereas in essentially neuralgic cases anti-neuralgic measures might be resorted to.

PULMONARY GANGRENE IN PNEUMONIA.

Dr. L. E. HOLT presented the lungs removed from the body of a boy three years of age, who died after two weeks' illness with pneumonic symptoms. The child had always been very healthy, and had never had any sickness except a bronchitis at the first year of age. At the autopsy a sacculated pleurisy containing turbid fluid was found over the middle of the right lung behind. Both lungs were strongly adherent to the chest-walls, the right one particularly so. There was extensive formation of new membrane over the entire surface of the right lung. The upper lobe showed only congestion and œdema. The upper portion of the lower lobe presented the usual gross appearances of broncho-pneumonia. Over the base were two large, irregular areas, dark in color, grayish at the borders, and in the centre gangrenous spots were found, varying in size from a walnut to a pea. The interior could be washed away with a moderate stream of water. There was no marked separation between the necrotic and the living tissue. The areas of gangrene did not correspond to the distribution of the pulmonary artery, but to that of the bronchi. The bronchi were much inflamed. The heart was normal. The kidneys were enlarged, light in color, soft, the markings indistinct. There was nothing to attract attention to the urine during life, but that found in the bladder after death was found to contain albumen and casts. Dr. Holt was not inclined to think there was any connection between the occurrence of gangrene in the lung and the disease of the kidneys. He quoted the literature of gangrene of the lung occurring during the course of pneumonia, and said that such cases were very rare indeed, and were found less frequently in children than in persons more advanced in years. The autopsy had been made by Dr. Northrup.

UREA NOT A CAUSE OF URÆMIA.

Dr. G. L. PEABODY said that at the last meeting of the Society he had expressed the opinion that too much stress had been laid upon urea as a cause of uræmia, his opinion being based more or less upon observations in the lower animals. Dr. Seguin had been of a similar belief, but spoke of experiments recently made in which it would seem that uræmic symptoms might be induced in lower animals by injection of urea into the blood. Dr. Seguin had since informed Dr. Peabody where he could gain access to the records of the experiments to which he had referred, and Dr. Peabody took occasion to show to the Society that it would require, according to the amount of urea necessary to produce death by injection into the circulation of the dog during these experiments, one pound and a half of urea to produce a fatal result in man. But it had been shown that in a man of one hundred and fifty pounds weight, dying of uræmia occurring in the course of kidney-disease, the blood contained only nine-thousandths of one pound of urea. There might be apparent fallacies in this manner of drawing conclusions, but he thought it showed very conclusively that such experiments upon animals could give us little useful information as to the cause of uræmia in man. The injection into the blood of benzoate of soda or of sulphate of soda, agents which were not in themselves poisonous, would likewise produce uræmic symptoms. The experiments quoted went no further than to show that the injection of a certain amount of any foreign substance into

the circulation would produce death; they did not show that uræmia was due to the presence of urea in the circulation. He had seen several cases in which there had been entire suppression of the urine, terminating fatally, in which there had been none of the so-called uræmic symptoms.

ABSCESS OF THE LIVER WITH OBSCURE SYMPTOMS.

Dr. PEABODY also related the history of a case and presented specimens, there being certain indefinite symptoms leading him to suppose that the man had once had typhoid fever and that his last illness was due to a relapse of that disease, but the autopsy showed two abscesses of the liver, the larger containing half a pint of pus. There were also ulcers of the large intestine. The stools during life had presented the ordinary appearance of stools after the taking of compound cathartic pills, which the patient had received for constipation.

SARCOMA OF THE KIDNEY.

Dr. FRANK FERGUSON presented a kidney, the seat of sarcoma, supposed to be congenital, removed by operation from a child four years of age. The history of the case had already been put on record by Dr. Little.

Dr. FERGUSON also presented a tumor of the first phalanx of the right ring-finger, which followed an injury, and containing a large number of so-called giant cells.

In reply to a question by Dr. WYETH, Dr. PEABODY and Dr. NORTHRUP said that it was very seldom that a case of congenital sarcoma came under observation.

RUPTURE OF ANEURISM OF THE ABDOMINAL AORTA.

Dr. G. A. DIXON presented an aneurism of the abdominal aorta removed from the body of a woman, 26 years of age, who was admitted to the hospital November 18 and died on the 21st. Her father died of phthisis, and her brothers and sisters died young. There was no history of syphilis. Since last spring she was treated in St. Luke's Hospital for femoral aneurism, which was reduced by pressure, and she was discharged cured. Three months ago her courses ceased, the appetite failed, there was nausea and some vomiting. A month ago the patient noticed a lump in the abdomen which pulsated. On examination, the patient was weak, anæmic, constipated; vomited a great deal; could not sleep because of pain. Physical examination revealed a systolic heart-murmur, a pulsating tumor in the epigastric region, the seat of a distinct impulse occurring with the second sound of the heart. The tumor had a marked thrill, with a double bruit. The patient died in collapse. At the autopsy was found an aneurism of the abdominal aorta, near the cœliac axis. Nearly the entire wall of the aorta was involved in the sac, and anteriorly was a rupture about half an inch in circumference. Above the aneurism was an atheroma, and below a constriction of the vessel scarcely admitting the little finger.

FIBROID TUMOR OF THE UTERUS.

Dr. H. C. COE presented two uteri with fibroids, removed by abdominal section.

GLEANINGS FROM EXCHANGES.

PAPAYOTIN is the active principle of the juice of the melon-tree (*Carica Papaya*, L.), native of the tropical zones, and flourishing especially in Brazil, where it only requires about six months to grow to a man's height and to furnish fruit which ultimately attain a weight up to fifteen pounds.

After three years, when the tree is about eighteen feet high, and about a foot in diameter, it begins to die off from above downwards. Up to this period, however, it is very fruitful, there being no period of the year when it does not bear either flower or fruit. The wood contains an abundance of yellow, rather bitter milky juice, which possesses in a high degree the property of digesting albumen, and therefore also meat, similar to gastric juice. It has, moreover, the remarkable property of not confining its digestive action to acid solutions, as is the case with pepsin, but it is equally active in neutral or alkaline solutions.

The French chemist Wurtz, in conjunction with Bouchut, first extracted the digestive ferment, *papayotin* or *papaïn*, in 1880. Bouchut employed it in the Child's Hospital in cases of dyspepsia and other disturbances of the digestive organs for which pepsin had previously been used, and obtained the best results. Rossbach found that the substance was capable of rapidly dissolving and removing the membranes forming in croup or diphtheria, and thereby greatly contributing to a favorable termination of the disease. It is assumed that by the "digestion" of the diphtheritic membranes and the morbid elements probably existing in them the further introduction of the latter into the blood is prevented. But it will require further study to fully clear up its method of action and its value as a remedy in these diseases. (It is applied by brushing over the diphtheritic spots a solution of the substance.) It is, however, important that only a reliable preparation be used, since there are some in the market which are quite inert. (Dr. W. Fliess, in *Pharm. Zeit.*)—*American Druggist.*

A CASE of fracture of the penis in a young and healthy man, with complete recovery, is reported by Dr. Veazie in the *New Orleans Medical and Surgical Journal* for October.

MISCELLANY.

COCAINE IN DENTISTRY.—In an article in the *Dental Cosmos* for December on the "Hydrochlorate of Cocaine," the new local anæsthetic, the author, Dr. Howe, speaks enthusiastically of his experience with it in filling teeth. The application of a few drops of a two-per-cent. solution upon cotton placed in the cavity of a tooth will reduce the sensitiveness of the dentine so as to permit cleaning and filling with practically no pain and but little discomfort.

THE BIOLOGICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA was formally opened on the 4th instant by Provost William Pepper. Addresses were made by Drs. Harrison Allen and Joseph Leidy. The Faculty of this Department is constituted as follows: William Pepper, M.D., LL.D., Provost of the University and *ex-officio* President of the Faculty; Joseph Leidy, M.D., LL.D., Professor of Anatomy, Director of the Biological Department; Joseph T. Rothrock, M.D., B.S., Professor of Botany; Harrison Allen, M.D., Professor of Physiology; Andrew J. Parker, M.D., Ph.D., Professor of Comparative Anatomy; Horace Jayne, M.D., Professor of Vertebrate Morphology; Benjamin Sharp, M.D., Ph.D., Professor of Invertebrate Morphology; N. Archer Randolph, M.D., Instructor in Physiology. Further details will appear in the next issue of the *Times*.

DEPARTMENT OF PHYSICAL EDUCATION AT THE UNIVERSITY OF PENNSYLVANIA.—On the 2d instant the Trustees of the University added a new department to those already in existence, and elected Dr. J. William White Director, with a place in the College Faculty and the title of professor. It is intended to model the new institution upon that of Harvard at Cambridge. The sum of fifty thousand dollars will be required for a gymnasium, of which ten thousand has been subscribed by the athletic department of the University.

NEW PROFESSORS.—Dr. Edward T. Bruen has been elected Professor of Physical Diagnosis, and Dr. Louis Starr Clinical Professor of Diseases of Children, in the University of Pennsylvania.

NOTES AND QUERIES.

FREIBURG.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

DEAR DOCTOR,—In the *Philadelphia Medical Times* for August 23, 1884, I published a communication "Concerning Student-Life Abroad," and to the few remarks made concerning the University of Freiburg in Baden I would add an extract from a letter just received from Prof Baumler.

What I said about Freiburg and its advantages for health and opportunities for the deepest study was not overstated, and I sincerely hope that some of my countrymen may make that town a visit and become members of its ancient and honorable medical department. There are few places in Germany where better and more profitable work can be done. The student, native or foreign, has exceptional advantages there, and, the living expenses being very reasonable and the climate very healthy, I always urge the claims of Freiburg as of primary importance. I have in the communication referred to explained my reasons for so doing. Professor Baumler writes as follows, and I may say that by his own faithful efforts he has contributed not a little to the success of the improvements made:

". . . We try to do our best to further our university, and if you came here now you would find the hospital vastly improved, a new chemical laboratory, a new house for pathological anatomy and experimental pathology. A clinic for mental diseases, which will contain eighty beds, is going to be built immediately, and the newest addition to our laboratories will be one for zoology and comparative anatomy, under our celebrated zoologist, Weisman. . . .

(Signed) "CHRISTIAN BAUMLER."

It is very fortunate for the foreign student that Prof. Baumler is so kindly disposed to assist all who come in his way, and his distinguished position and time fully occupied show the generosity of the learned professor's character. With my best wishes for Freiburg and the faculty, I am

Very truly yours,
W. THORNTON PARKER, M.D.

ATLANTIC CITY, NEW JERSEY,
December 2, 1884.

OBITUARY.

PROF. SAMUEL M. BEMISS, M.D., of the Tulane University of Louisiana, on November 18 died suddenly of apoplexy, at his home in New Orleans, in the 64th year of his age. He was a man of distinguished attainments, of noble character, and of great social qualities. His loss is mourned as a public calamity.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 23, 1884, TO DECEMBER 6, 1884.

IRWIN, B. J. D., MAJOR AND SURGEON.—Granted one month's leave of absence. S. O. 112, Department of Arizona, November 28, 1884.

O'REILLY, ROBERT M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as attending surgeon, Washington City, D.C., to date from October 20, 1884. S. O. 284, A. G. O., December 4, 1884.

LORING, LEONARD Y., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post surgeon, San Diego Barracks, San Diego, Cal. S. O. 135, Department of California, November 19, 1884.

BARROWS, C. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—In addition to other duties, to take charge of Medical Director's Office, Department of Arizona, during absence of Surgeon B. J. D. Irwin. S. O. 112, Department of Arizona, November 28, 1884.

WILSON, GEORGE F., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted one month's leave of absence, from November 20. (Vancouver Barracks, Washington Territory.) S. O. 180, Department of the Columbia, November 18, 1884.

KNEEDLER, WM. L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort A. Lincoln, Dakota Territory, and ordered to Camp Poplar River, Montana Territory. S. O. 140, Department of Dakota, November 25, 1884.

PILCHER, JAMES E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—To be relieved from duty at Camp Poplar River, Montana Territory, and ordered to Fort A. Lincoln, Dakota Territory. S. O. 140, Department of Dakota, November 25, 1884.

WALES, PHILIP G., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Now at Fort Cœur d'Alene, Idaho Territory, ordered for temporary duty at Vancouver Barracks, Washington Territory. S. O. 179, Department of the Columbia, November 17, 1884.

MCCAW, W. D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Wingate, New Mexico, and ordered to Fort Lyon, Colorado. S. O. 228, Department of Missouri, November 26, 1884.

GRAY, CHAS. C., MAJOR AND SURGEON (retired).—Died at Geneva, N. Y., November 26, 1884.

NAVAL MEDICAL OFFICERS.

There were no changes in the Medical Corps of the U.S. Navy from November 23 to December 6, 1884.

PHILADELPHIA, DECEMBER 27, 1884.

ORIGINAL LECTURES.

CLINICAL LECTURE ON SUBACUTE BRONCHITIS IN CHILDREN.

Delivered at the Philadelphia Hospital

BY JOHN M. KEATING, M.D.,

Visiting Obstetrician to the Philadelphia Hospital, and Lecturer on Diseases of Women and Children.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—I shall, in the first place, bring before you a case which you saw some weeks ago, in order to show you the results of treatment. This child, as you will remember, is about 18 months old, and came into the ward in a very wretched condition. At that time I gave you a complete demonstration of the physical signs which were present. The child had been neglected before being brought to the house, and was at that time suffering with bronchitis of a subacute type. The treatment I then recommended was pursued. For some time the child did not seem to improve. At the same time, he did not seem to lose ground. Afterwards improvement gradually began, and the child is now much better than when you last saw him. It shows that, with proper care, children in even as low a condition as this one will pull through. This is, of course, more apt to occur in private practice than in hospitals. There was scarcely any fat on this child's bones when it was admitted, but now the chest has become much fuller, and the arms and limbs have grown larger. Its expression of countenance has also improved.

The treatment has consisted in the daily rubbing with a liniment containing cod-liver oil. It also received an emulsion of cod-liver oil, one-fourth of which was composed of the oil. To this was added Lugol's solution of iodine in the proportion of one drop to each dose. Quinine suppositories have been used for their tonic effect.

One reason for bringing the child before you to-day was on account of the question which arises as to the reason of the rapid wasting in this case. As I told you, the rapid wasting in such a case as this might depend on tubercular disease. This was especially the case, as we heard that the mother had died of phthisis; also we had symptoms calling our attention particularly to the chest, and there was a probability of enlargement of the abdominal glands. One point which was absent in this case was the fever. This is rather important, for the fact that there was no fever in this case rather pointed to the absence of tubercular disease. The temperature was taken every night with the thermometer in the rectum,—which is the proper way of taking the temperature in children,—but no rise of temperature was observed. The bronchitis gradually disappeared; the pulse remained normal; food began to be digested. The diet consisted of milk and Valentine's beef-extract, which is used quite largely in this house. There has been no vomiting, no purging, and no extra amount of tympanitic distention of the abdomen.

The next question—that of syphilis—was carefully discussed, and we came to the conclusion at the time that, as far as symptoms and appearance were concerned, there was no reason to believe that it existed. But our suspicions were aroused, and they always should be in the wasting diseases of children. The child did not have "snuffles" when it entered the house. What it had at birth I am unable to say. There was no eruption, nor stains of one; no mucous patches. Nevertheless, the results of treatment point to a syphilitic taint, but one which does not involve the integument or mucous membranes.

It might be that the poison came from a long-existing disease in either parent, which had been modified and rendered latent by constitutional treatment or time, and thus appeared in the offspring, as you see it affecting the mesenteric and bronchial glands, checking bony deposit, perverting dentition, and interfering with circulation by minute gummy deposits.

Do you always find emaciation in cases of inherited syphilis? By no means, according to my experience. This I wish to impress upon you. Some of you may remember a case which I showed to the class last year, one year of age, which had very large gummæ on the back and on the thighs. The infant was remarkable for its size and appearance of health. My friend

Dr. Van Harlingen, who saw the case, pronounced it syphilitic. The child had never been sick a day, but had been born with a "cold," and its mother had previously miscarried, and gave evidence of specific disease.

One of the worst cases of constitutional syphilis that I ever saw in this house was well nourished,—indeed, stout for its age. I have often noticed this, and I believe that it constitutes a characteristic of children who are infected with a mild form of specific disease inherited from parents who have supposed themselves cured before marriage. I would ask you to bear this in mind should a robust and to all other appearances healthy infant be brought to you with obscure symptoms,—a persistent eczema, or rickets in the ordinary acceptation of the term,—it may be really either retarded ossification, or, possibly, osteomalacia.

I recently attended the autopsy of a child, and from the appearances determined that it was syphilitic. It was but a few months old. The child was well nourished, had well-rounded limbs, and its chest was well covered with fat. It died from heart-clot, possibly caused by the pressure of enlarged glands. The heart-clot was enormous, greatly distending the right ventricle, completely shutting off the supply through the pulmonary artery. It extended through the jugulars and into the lateral sinuses. In the centre it was firm and of a chicken-fat color. The mesenteric glands were as large as grains of barley, some much larger; in fact, all the glands were enlarged.

The father afterwards acknowledged a hard chancre and palmar psoriasis many years before.

I am led to believe that the more we study these disorders from a clinical standpoint, the more we shall be impressed with the fact that many of the phases presented by the strumous diathesis are simply evidences of the presence of syphilitic virus, latent perhaps for many years in the father, transmitted by him to the offspring independent of the mother, and appearing at times when there is nothing to call our attention to it as a cause, and in so insidious a manner as to quiet suspicion. This is still a mooted question.

One feature has been well marked for some time. The child's head has become much larger. You will notice that the expression of its countenance differs from that ordinarily found. The eyes have a sort of upward look. The forehead, which projects, is somewhat square, and over it enlarged veins can be distinctly seen. The head also has a square shape. The veins are especially distinct over the top of the head. This marked prominence of the veins may be due to one of two causes. One is that, as the child is very much emaciated, and there being little fat, the veins are not covered up. Another reason is that the veins are distended. I think, in this case, the condition of the veins is not due altogether to the emaciation. There is a chronic venous congestion, which, taken in connection with the increased size of the head, which has been noted by actual measurement, would point to the fact that there is something distending the head and pressing out the bones. In fact, we have evidence of effusion taking place within the skull, producing pressure and expanding the head on all sides. Although this distention is not very marked, still it is sufficiently so to give you an idea of the appearance of a hydrocephalic head. Hydrocephalus, in these cases, is due, in all probability, to obstruction to the return of the venous circulation, especially at the base of the brain. In many cases it is due to thickening of the membranes at the base of the brain, which is the result of chronic meningitis, brought about, possibly, by tubercular deposit in the course of the small radicles of the arteries. This is usually the seat in which these deposits occur in children. Interference in the circulation of the veins then takes place, with congestion and consequent effusion. This effusion is generally found at the base of the brain and in the ventricles.

There is not present in this case, as might be expected, marked protrusion of the fontanels. The fontanels have not yet closed. They are not depressed, as they were at first, as a result of the anæmia. The anterior fontanel is level with the bones of the skull; it still pulsates, but it does not bulge as in a case of marked effusion. In cases where hydrocephalus begins early, before the closure of the fontanels, we should have marked bulging if the effusion came on rapidly. This child's head does not seem to be growing in size now. The probability is that this condition is a part of the general

disturbance of the circulation and general anæmia, and that we have no real hydrocephalic condition.

Possibly syphilitic gummata have been deposited upon the radicals of the vascular system of the pia mater at the base of the brain, forming what to the eye would appear as a clouding of the surface. The effusion resulting, meeting with the least resistance from the unossified sutures and open fontanels, would gradually increase the size of the head and give it this shape.

Do not confound this condition with what is known as hydrocephaloid disease, or spurious hydrocephalus, a condition of affairs found usually in the exhausting diarrhœas of children, and called Marshall Hall's Disease. That is exactly an opposite condition from that which is present here. In the one there are symptoms of anæmia of the brain, produced by the exhausting discharges; in the other there are symptoms of anæmia of the brain, produced by obstruction of the circulation. Both are due to anæmia of the brain; in the one due to the exhausting discharges from the bowels, as in cases of cholera infantum and enterocolitis; in the other due to some interference of the circulation, as from basilar meningitis; as a result effusion takes place, and anæmia follows. The anæmia results not only from the interference with the circulation, but also from the pressure of the effusion. The symptoms in the two would be much the same. In the hydrocephaloid condition there is depressed fontanel, pallor, and diarrhœa. Where effusion is due to obstruction of the circulation, there is a bulging or a level fontanel.

This case would represent a case of true hydrocephalus,—*i.e.*, a condition where effusion has taken place within, and as a consequence there is venous stasis occurring in the brain as a result of the pressure and as a result of the interference with the arterial supply.

Suppose this child exhibited very marked evidences of rickets, what would be the result? So-called rickety bones do not contain the normal amount of calcareous matter, and as a consequence they are softer than natural. In these cases the sutures do not unite until late. If, in such a case, effusion take place within the cranium, it would produce separation of the bones and give the peculiar shaped head which is diagnostic.

There is another variety of syphilitic rickets affecting the skull, the so-called cranio-tabes, in which the syphilitic virus has prevented ossification in fœtal life. In such skulls the points of ossification are seen; the rest of the skull is composed of membranes only and bony deposit in striations.

There is another form of rickets that comes on in children of three or four months as an acute febrile affection, with inflammatory congestion of the bone-marrow, especially attacking the long bones at their extremities. It runs a definite course and terminates in more or less deformity of the skeleton, with the formation of ivory-like bone, more or less curved in accordance with the strains placed upon it during the first or soft stage by pressure or muscular tension. That disease I believe to be a neurosis.

We shall continue the treatment which has already been adopted. We shall add to it one remedy which I think will be valuable. We shall give small doses of nux vomica, in order to strengthen the heart's action and increase the force of the circulation. The cod-liver-oil emulsion and the quinine by suppository will be continued. We will also begin with iodide of potassium in half-grain and gradually-increasing doses with the milk. The diet now consists of condensed milk (I greatly prefer *peptonized* milk) and arrow-root, but as the child grows stronger it would be well to put it upon stronger food, as, for instance, oatmeal gruel. This will supply the phosphates, which are important in the treatment. This should be well cooked and made thin, given twice a day. It is important in these cases not only to order food which is theoretically the proper thing, but it is important to see that this is digested. There is no use giving oatmeal if it be not digested, absorbed, and assimilated. The starchy elements have to be converted into grape-sugar. This is done more particularly by the ferment of the pancreas. It is therefore desirable to give the meal in such a form that it can be readily acted upon by the digestive juices. In England a small quantity of malt is often added to the meal, the action of the malt diastase being to convert the starch into grape-sugar. This principle has been adopted in Liebig's food. In some preparations malted grain is incorporated with various forms

of meal, so that when the mixture enters the bowels it can be digested and the starch converted into glucose. Mellin's food is made on this principle, and is probably one of the best in the market. Horlick's food also is made in this way.

We shall put this child on small quantities of oatmeal, giving it at first once a day, well boiled, and with very little sugar added, so as not to give rise to lactic acid. While this is given, its effects upon the bowels will be watched.

I wish you to bear in mind that in this case the instructive point is in regard to the temperature. If this child's temperature had gone up every evening to 101° or 102°, or there had been evident hectic, the prognosis would have been unfavorable; but, as the child's temperature has remained normal, although the other symptoms were very severe, the chances are that it will pull through.

Case II.—Mulatto infant, aged one year. Brought in the house by its mother, who is a married woman with several other healthy children.

This child is in much the same condition as the first one was a few weeks ago. There are, however, some points in the case which, in contrast with the case we have just seen, require special study. It is still very sick, though much better than a week ago. Its mother, who is a hard-working woman, placed the child out to nurse, and it has, without her care, gotten into the condition which you see. As it is now quiet, I shall make the physical examination of the chest. There is no difference in the percussion-note of the two sides. One week ago the right side posteriorly showed marked percussion-dulness. This dulness remained for two or three days. To day it has almost entirely disappeared. We lose even the liver-dulness. This is due to the immense distention of the colon or stomach with gas. In cases so emaciated and run down as is this child, there is usually decomposition of the mucus in the alimentary canal, and this gives rise to a large amount of gas, which distends the stomach and bowels, filling up the abdominal cavity and encroaching upon the thorax.

In rickety children this is a serious matter, and, by distending the lower portion of the thorax, leads to the peculiar hour-glass shape which is so characteristic. Protracted distention of the stomach by gas may, and frequently does, cause a permanent dilatation of the stomach in children, which is obscure and difficult to treat, and may be fatal. Excessive tympany, succussion, and indigestion are the frequent symptoms.

The child breathes very naturally, both sides seeming to expand alike. There is no sudden jerk in the respiratory movement, and there seems to be no pain connected with the movements of the chest. No pain was caused by percussion. The temperature has not been elevated. There is no vomiting. Up to two days ago there was some cough, but since then it has disappeared. Its appetite is good, and it does not fret much during the day.

When I first saw this child, I found from its history that it had been neglected. It was extremely emaciated. It, however, presented no specially prominent symptom except the cough. On percussion, I found dulness of the whole right side of the back. On auscultation, exaggerated, puerile breathing was heard above, but feeble breathing at the lower parts. The voice did not seem to be directly beneath the ear, as it would have been if conducted by a solidified lung. There was therefore no pneumonia. Placing both hands on the chest, I found diminished expansion on the right side. This dulness on percussion amounted to flatness. It was not the dulness of pneumonia. I thought that, in all probability, it was due to fluid effusion, which, when it occurs in children who are run down, is usually semi-plastic in character. It is frequently found post mortem when it had not been suspected before death. I do not recall having ever seen a child thinner than was this one when it came in.

In this case the treatment was an energetic one of tonics and counter-irritation. We also used cotton wadding around the chest, for the purpose of keeping the child warm. Counter-irritation was especially applied over the portion of the chest where we found dulness on percussion. The child was given cod-liver oil, and it was rubbed with it. The result is that the deposit has entirely cleared up in the course of a few days. The effusion has disappeared, and at present the child presents no evident pulmonary trouble. The cough has also almost entirely disappeared. The temperature in this case is also normal. In this case I have totally failed to get any evidences of syphilis.

These cases are instructive ones. If you are called to such a case, you should see that the child is kept warm, that the circulation is increased, that the organs of digestion are encouraged, and that the excretory organs are active, so as to carry off the waste. If the case is treated in this way, gradual improvement will be noted from day to day. This case should get well if the treatment is carefully carried out. The treatment is similar to that adopted in the previous case. In a few days it will be well to give oatmeal.

An important item in these cases is to keep the skin active. Tepid baths of rock-salt water are of importance. The skin is rubbed twice a day with cod-liver oil. It is therefore important to see that the skin is thoroughly cleansed, in order that its function, which is to a certain extent supplementary to that of the kidneys, be not impaired.

ORIGINAL COMMUNICATIONS.

INFECTIOUS SORE THROAT.

BY HUGO ENGEL, A.M., M.D.,

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SOME authors contend that acute tonsillitis and diphtheria are caused by one and the same poison; others insist upon different pathogenic elements causing both diseases. It is possible that both views are correct, assuming that by acute tonsillitis two distinct maladies may be meant.

In my opinion there are two kinds of acute sore throat,—the catarrhal and the infectious. In the first abscess-formation in one or both tonsils is a common occurrence, while in the last pus never forms. Though the inflammation may be intense in the former, the mucous membrane affected never assumes the angry and dark-red, shiny hue which is usually met with, at least in severer and typical cases of the latter. Further, while in both the tongue is apt to be heavily coated, in the catarrhal form, after the coat has been thrown off, the tongue resumes its normal appearance; but in the infectious kind, after the incident mentioned has taken place, the tongue shows the same fiery redness as the throat, it being shiny, near to its point greatly resembling the strawberry-tongue of scarlatina, and evincing a tendency to dryness. Then, in this variety, the patient suffers from the beginning from a peculiar weakness and lassitude, phenomena which are never observed in the catarrhal or simple sore throat, be it acute and intense or not.

But what still more indicates their different nature is the following. The infectious sore throat frequently makes its appearance in a house where one or more other members of the family are affected with diphtheria; the same rheumatic symptoms and the same peculiar eruptions that characterize many cases of diphtheria also accompany the infectious tonsillitis, and we occasionally find albumen in the urine,—a fact which to my knowledge has never been observed in simple sore throat. But what struck me as most peculiar was the frequency with which women are attacked by an infectious angina, complicated by rheumatic symptoms and a skin eruption. It was this observation which induced me to write these lines.

As is probably the case in every large town of our Northern and Middle States, diphtheria and sore throat are prevalent in our city during the autumn months, more so than during the spring or at any other time of the year. My attention having been drawn but recently to the infectious character of angina cynanche, I refer in the following to my experience only during the past two years.

In the autumn of 1883 two, and this fall three, cases of the disease which I am about to describe came under my observation, either in my own practice or in that of medical friends calling me in consultation. These five cases happened in women, and, while I cannot contend that the malady is met with only in the female sex, in an experience of twenty years—if my memory is correct—I have not seen a single instance where a male person had suffered from it, and several colleagues, enjoying an extensive practice, on reflection admitted that they had made the same observation, since they came to think of it. To give rise to no doubt, I premise that by saying the disease has been noticed only in females I do not mean the infectious angina in general, but the peculiar form under which it made its appearance.

I shall not tire the reader with reporting the history of all five cases, but select only that of the most typical. October

16 of this year a lady, the mother of a large family, came under my charge. She was suffering from a mild case of pharyngeal diphtheria. On the 19th of the same month her eldest son was attacked by the disease in a graver form; on the evening of the same day his seven-year-old brother contracted a severe sore throat, without evincing at any time, though the parts were daily inspected with special care, the least sign of a false membrane; and on the 21st his two-year-old sister had the first symptom of the disease in its worst form,—nasal diphtheria. The last patient died on the ninth day of her illness, October 30, under all the symptoms of septic poisoning. No other member of this family became infected, and the patients all recovered except the little girl mentioned.

The day before the death of the child, on October 29, one of the two servant-girls, Lizzie D., æt. 20, commenced to complain of sore throat. I saw her in the afternoon, when she told me that the evening before, near six o'clock, she had been feeling chilly, and immediately after noticed a pain on swallowing. The pain she referred to the right side of her pharynx. During the night she had slept but little, having suffered "from a burning fever, great thirst, and much pain in her throat and neck." In the morning some amelioration of the symptoms had set in, the fever having left her to a great extent, and the pain having lessened in severity, and the thirst ceased. But soon after dinner the symptoms had resumed their former vigor.

On examination, I found the whole pharynx, especially the soft palate, uvula, and tonsils, greatly inflamed. They had an angry, dark-red, shiny look. But nowhere was any diphtheritic patch to be discovered. Her tongue was coated with a heavy, yellowish, cream-like fur. Temperature, 104.1°; pulse, 122. The skin over her neck, chest, abdomen, back, and arms was nearly of a uniform deep redness, about a shade darker than is generally observed in scarlatina, and in this redness a papular eruption resembling that of morbilli was plainly visible and sufficiently developed to give to the touch the sensation of roughness. Her face showed the same red tint, but without the papules; the palms of her hands were in the same condition, while their dorsal surface evinced the normal skin. Exactly at the crest of the ilium all eruption ceased, her lower extremities being completely free from any change in the normal appearance of the skin.

During the next two days these symptoms continued. Usually at 10 A.M., at 5 and near 8 P.M., the temperature, which during the rest of the time did not exceed 101.2°, suddenly ascended, reaching within ten or fifteen minutes the height of 104.4°, and remaining at that height for about one hour, though sometimes nearly two hours and more. Generally, before the increase of temperature set in, the patient complained of feeling chilly. During these afebrile hours the skin appeared normal, the pulse was lowered in its frequency to 90, and all pain ceased or nearly did so. During the same time the patient felt only weak, and evinced scarcely any other symptom of general malaise but that "her bones ached her." She felt inclined to talk, and had a desire for food, though she vomited almost everything which she swallowed. But the moment the increase of temperature commenced the erythema and the eruption at once made their reappearance, the pain in the throat and nape of the neck returned, the patient complained of the dryness in her throat, became listless, and scarcely replied to any question, moaning all the time; she suffered from severe thirst, and her pulse beat at the rate of 124 per minute.

On account of the heavy coating of the tongue, the nausea, and the vomiting, and also because experience had proved to me that vomiting, if induced by medicine, generally accelerates the cure of acute tonsillitis, I gave her on the second day a sufficient dose of tartar emetic to cause emesis. The next morning the tongue was clean, but evinced the same fiery redness as the throat, and at its point for about one-fourth of its length it had the so-called strawberry appearance, while at about its middle it felt dry. The other symptoms continued unabated, only the vomiting ceasing. But on the fourth day of her illness the picture of the malady somewhat changed.

The fever, still appearing at stated intervals, now lasted but half an hour, and was then followed by the most profuse perspiration, not acid in character. The patient, besides, commenced to complain of the most excruciating pains in her righ

shoulder. On my inquiry, I found that there had been no urine excreted for the last twenty-four hours. I therefore added to the other treatment, soon to be mentioned, a teaspoonful of the infusum digitalis every fourth hour. The next morning she again micturated, but the urine contained considerable albumen, no blood, but a few hyaline casts. I will here mention that two days later the excretion of the urine was normal and free from any morbid contents.

During all this time the patient had slept very little, and taken but fluid nourishment in very moderate quantity. Her bowels had to be moved by laxatives, but they responded very readily to their action. One-third of a bottle of a solution of citrate of magnesia, for instance, was followed by four loose stools of a greenish color and fetid odor. There was no pain in the right iliac fossa, no gurgling sound, and no tympanitis whatever. When the symptoms enumerated had continued for several days, a change for the better set in. That was on the seventh day of the illness. Even during the febrile period the temperature increased but to 102°, and on the eighth day to 100° ; the dryness of the throat left her; the pain in the shoulder gradually ceased, the perspiration became less profuse, the skin-eruption disappeared, and the throat and tongue regained their normal hue, though rather slowly. By the twelfth day all morbid symptoms had vanished, and the patient entered upon a rapid convalescence, though, considering the shortness of the malady and its character, she was emaciated to a high degree and remarkably feeble during the first week of her recovery. For nearly the whole of this week the tongue evinced some indication of its former morbid condition by its darker tint. When I visited the patient for the last time, at the end of the third week, she informed me that she knew almost nothing of what happened during the first four or five days of her illness, and that she only remembered that it had seemed to her as if she were in a strange room, lying upon the shelf of a closet instead of in the bed, and that she had tried to collect her thoughts, but that she had not succeeded, until she one day had a clear idea of herself and where she was. That must have been on the fifth or sixth day of her sickness, during an afebrile period.

I have mentioned this incident as indicating the serious nature of the complaint, for such aberrations of the mind happen only in the graver kinds of acute infectious diseases. With very little alteration, the above is the history of all the cases. Only in one instance, also that of a young girl, æt. 17, I discovered a small whitish patch on the left tonsil. The false membrane had about the size of a silver threecent piece, looked much whiter and was much thinner than a diphtheritic patch. It disappeared within thirty-six hours. The fever and perspiration at certain hours of the day, the skin-eruption, the rheumatic pains, the affection of one shoulder-joint, the vomiting, coated tongue, and sore throat, and the feeling of debility and lassitude, were present in all cases, varying but in degree. As the disease lasted in all the same length of time, we have in this self-limitation another proof of the infectious character of the disease. But that an exposure to cold and wet seems to exert at least a predisposing influence I cannot doubt from the history of the cases. Every patient ascribed the disease to catching cold, and dated its commencement from an occurrence of that kind. Lizzie D., though diphtheria had been in the house in which she lived for two weeks, and though she had been in frequent and prolonged contact with every victim of it during that time, had not contracted the malady until, on the day before it broke out on her,—the weather being cold, chilly, and somewhat damp, — she had been washing windows and walking over wet places with torn shoes, and been doing so for several hours, so that her stockings were completely soaked when she finished her work. A somewhat similar element existed in each case.

That peculiar eruptions frequently accompany diphtheria and sore throat has often been reported. But recently Dr. C. Boeck published two such cases.* In one, eleven days after the beginning of the sore throat, and while the morbid symptoms of it had not yet totally disappeared, a characteristic multiform erythema set in, and, in a second case, one month (!) after the commencement of a follicular angina, and while the debility and lassitude, which so frequently endure for a long time after this disease (!), still continued, rheumatic

* Vierteljahrsschrift f. Derm. und Syphilis, 1884, p. 481.

affections accompanied by *purpura rheumatica* complicated the original malady. Though debility and lassitude, at least in my opinion, very seldom last so long in simple sore throat as Dr. Boeck states, I agree with him in his explanation of the accompanying phenomena. He believes that the accidental symptoms and the inflammation of the throat stand in causal connection to each other, and the numerous nerve-fibres of the pharynx, intimately connected as they are with the sympathetic, seem to him of special importance in this respect.

Sore throat, though more of a chronic character, is met with in weakened conditions of the heart, as in fatty degeneration and dilatation of the organ (probably due here to venous stasis); syphilis may give rise to very severe forms of acute angina, and in rheumatism tonsillitis is not a rare complication, while in scarlatina it is the rule, in rubeola not the exception, and in morbilli but seldom completely absent. There are still other diseases, too numerous to mention, in which a sore throat is a common occurrence. There, further, is a difference between the catarrhal angina which develops from a catarrhal inflammation of the Schneiderian mucous membrane of the nose, travelling downwards, and the form where the inflammation has its acute beginning in the pharynx and usually stays there. This last variety is what I call the simple acute sore throat. An individual suffering from it, when young and vigorous, will often continue to attend to his daily affairs, no matter how annoying and painful the ailment to him; but in a case of infectious sore throat the person attacked by it is listless and gloomy; he does not care to perform any labor, and, besides, such a patient is too weak from the very onset of the disease to follow his usual occupation. He is forced to seek his bed; while in the case of simple angina the individual, if a young and vigorous man, can rarely be persuaded to stay in the room.

If it be true that the numerous nerve-fibre connections of the pharynx with the sympathetic occasion the rheumatic symptoms and the skin-eruptions, we probably have an explanation of the fact that especially women are attacked by the form of infectious sore throat which is complicated by the two phenomena mentioned. Had I seen but one or two cases of this kind in women, or had the picture of the malady not been so uniform in its course and the grouping of its symptoms as happened in my five cases, I might have considered the occurrence an accidental one, for, though the number of patients is but very small, it is peculiar that they all were women. A physician meeting with such a case for the first time will be greatly puzzled, and especially young practitioners, still under the influence of the description which their teacher gave them of typical cases of disease, will either change their diagnosis several times or confess their inability to arrive at a definite conclusion.

A far greater number of cases than mine will have to be observed before we can say that the infectious sore throat always affects women in the manner described, or that it attacks all persons, whether male or female, adults or children, in the same way. Of one fact I am convinced, that there are two kinds of what we commonly call acute sore throat, the simple sore throat never showing the rheumatic symptoms confined to the larger joints, the skin-eruption, the ups and downs of temperature, the profuse perspiration, and the fiery, glazed tongue, while the infectious angina has these complications, as a rule, in women, but never gives rise to abscess-formation. But, while I think I am the first to insist upon this distinction between the two varieties, I am well aware of the fact that, without having in mind the possibility of the existence of the other kind, many authors have recently expressed the view that acute angina is caused by the same poison as diphtheria and is but a milder form of it. To this opinion I am not prepared to subscribe; for why is it that we have so very mild forms of pharyngeal diphtheria that they are discovered only, as it were, by accident, where the patient himself is not aware of its existence, and where the inspection of the throat reveals a slight redness and a very insignificant patch of false membrane? Still, I admit appearances are suspicious, and I have myself attended a case of sore throat in a family where the second patient, taken sick a day or two later and sleeping in the same bed with the individual suffering from the angina, was attacked by diphtheria. From recent investigations of Cohnheim and others, we know that several causes (for instance, emboli and

thrombi) may give rise to the formation of a false membrane on the mucous membrane of the throat, even simple infiltration of the submucous tissue (probably by pressure on the vessels) leading to it. The inoculation, therefore, of the mucus from such a sore throat, and its being followed by the formation of a false membrane, would be no definite proof that both diseases—infectious angina and diphtheria—are caused by the same pathogenic element. It is to be hoped that bacteriology will determine the question.

It cannot be said that in those cases which I consider as instances of infectious angina, a diphtheritic patch would be discovered if carefully looked for. In two of my cases (that of Lizzie D. included) I made the same objection to my own reasoning, and instituted a rhinoscopic examination, notwithstanding the difficulty attending it under the circumstances. Such patients cannot open the mouth widely enough, but by using a hook somewhat like Voltolini's palate-hook* I obtained a sufficient view of the posterior nares, the septum, and of the entrance to the Eustachian tube, to enable me to say for certain that a false membrane was nowhere deposited.

I do not think that a coaffection of the kidneys ever appears in simple acute angina; but I confess that I have commenced only this year to examine the urine of such cases. I had but two in my private practice, and in consultation I have seen none, as a second physician is rarely called in in acute tonsillitis, except in such complicated cases as those of the infectious form, when the eruption easily confuses the physician. In these two cases I found no albumen; besides, in this disease the excretion of the urine is probably never interfered with, while in the infectious variety the suppression of urine for at least twenty-four hours seems to be common. A fact like the last, doubtless, at once draws our attention to the function of the kidneys. It may be that this complication, should it be so uniform an occurrence as happened in my cases, will form an important factor in the differential diagnosis of the two diseases, even should it be demonstrated that the infectious angina attacks men with the same symptoms and complications as women. I may here mention that two of my patients menstruated during their illness. Lizzie D. did so on the second or third day, and in the other case the menses also appeared on the third day. In these two the discharge came at the usual time, so that the disease does not seem to exert any influence upon the menses.

Regarding prognosis, I can only report that my patients recovered without any untoward symptom. In some convalescence progressed less rapidly and left the patient weak for a longer time, but in the third week they generally were once more able to resume their customary occupation.

With reference to treatment, I always administer an emetic in the beginning. As long as vomiting lasts and the tongue appears coated, I give as little nourishment as possible. All my patients were young and vigorous, so that, instead of stimulating, I had more than once the idea of bleeding the patient, and would have done so, on account of the active inflammation, had not the feeling of general debility which attends these cases restrained me. This period usually continues to the third day, when, the irritability of the stomach having ceased, I let them take fluid, but nutritious, food, returning to solid aliment as soon as the condition of the pharynx permits its being swallowed without injury to the inflamed parts. I further advise the patient to use the following gargle every ten or fifteen minutes:

℞ Acid. salicylic., ʒj;
Acid. carbolic., ♏xxiv;
Sodii borat., gr. lxx;
Glycerin., fʒj;
Aq. destillat., fʒxj. M.
Sig.—Use as gargle.

Internally I order a teaspoonful, in half a tumblerful of water, of this medicine:

℞ Quininæ hydrochlorat., gr. xxxvi;
Tinct. ferri chlorid., fʒj;
Acid. muriat. dilut., fʒij;
Tinct. cardamom. comp.,
Glycerin.,
Syrup. aurant. cortic, āā q. s. ad fʒiij.
M.

This is taken every three or four hours until the more moist appearance of the tongue and the general condition of the patient indicate amelioration of the symptoms, when the size and the frequency of the doses are rapidly diminished. As soon as the first indication of disturbance of the urinary function sets in, I prescribe

* Die Rhinoscopie und Pharyngoscopie.

a teaspoonful of infusum digitalis to be taken every four hours. When the secretion has been re-established, I still continue for one day longer the same dose; for another day the patient is directed to take it but three times daily, and then this medicine is stopped, having achieved its purpose. If the pain in the neck or in the shoulder be very severe, I have found the best result from this liniment:

℞ Chloral. hydrat., ℥j;
Camphoræ, ℥ss;
Ol. amygdal., f℥j. M.

Sig.—To be applied with a camel's-hair brush to the painful parts, the application to be renewed on return of pain.

Besides paying attention to the bowels and employing general measures, as regular feeding, cooling drinks, sponging of the body several times daily, etc., the above contains the whole treatment. For the sleeplessness commonly met with in the beginning I have ceased to prescribe, as experience has taught me that the patients feel better, regain sooner their natural sleep, and recover more quickly, when no hypnotic whatever is employed.

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THE LEGAL CONTROL OF MEDICAL PRACTICE BY A STATE EXAMINATION.

BY JOHN B. ROBERTS, M.D.,

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Read before the Philadelphia Medical Jurisprudence Society, October 14, 1884.

IT is my intention this evening to briefly review the advantages that would accrue to the public and the medical profession by the enactment of a law placing the control of medical practice in the hands of a State Board of Examiners. As is known to many of you, a person who desires to practise medicine in Germany must pass a governmental examination. The students study in universities and take degrees, but such degrees do not confer the right to enter upon practice. The health and lives of the citizens of the empire are believed too valuable to be imperilled by the acts of ignorant physicians. Hence, although the universities themselves are under the supervision of the State, the candidate for practice must, in addition to his university examination for a degree, pass a governmental examination for license to follow professional work among the people of his vicinity. He is not a legally-qualified practitioner until this is accomplished.

The recklessness with which medical legislation has been neglected in this State will be apparent when I say that the medical schools are under no State or Federal supervision whatever, but have entire control of the time and character of studies required from the intending practitioner, examine him upon the same, and confer the medical degree, which is at once accepted by the authorities as evidence of sufficient knowledge and skill to entitle the possessor to practise medicine, surgery, and obstetrics in the community. Still further to encourage wholesale and unrestrained manufacture of physicians, the "doctor-manufactories" are, I believe, even exempt from taxation.

Until the year 1881 there existed in this commonwealth no law whatever regulating medical practice. At that time the law to provide for the registration of all practitioners of medicine and surgery was enacted by the General Assembly of Pennsylvania. It effected much good, and was a distinct step forward, though it has, among other minor defects, the weakness that the possession of a genuine diploma is taken as evidence of knowledge.

As long as the medical schools of the United States are dependent for prosperity upon the number of fees received from pupils, and as long as examinations by the faculties who receive these fees are the sole test of skill, a diploma, even from the highest-grade institution, carries with it little value as a diagnostic proof of professional learning. The old Latin proverb has it, "Caveat emptor" ("Let the buyer beware"). I say, "Caveat æger" ("Let the sick man beware"), if he believe that the fact of graduation from a renowned college confers intelligence and skill. The placard "No reasonable offer declined" usually tells the buyer that inferior quality of goods is to be expected. Would that many colleges had the honesty to display a similar escutcheon over their portals, reading, "No reasonable ignorance rejected!"

The step I advocate to-night is the creation of a Board of Medical Examiners, under State jurisdiction, who shall examine all persons desiring to enter upon practice in this State after January 1, 1886, without

regard to when, where, or how they obtained medical education. If such an examination by non-interested persons show the proper qualifications, the candidate is to be furnished with a certificate, and is then registered in the Prothonotary's office as heretofore. Let the medical schools teach, examine, and grant degrees as at present, but let no one practise in this State who has not been examined by those who have no interest in passing or rejecting him. In other words, merely substitute for the diploma the certificate of the State Examining Board as the requisite of registration.

The greatest advantage derived from such a law would be the protection of the public health from ignorant physicians. Bear in mind that I refer now not to Indian medicine-men, negro herb-doctors, and other charlatans, but to ignorant physicians, graduates of recognized and reputable schools of the United States and other countries,—such as are duly armed with beautifully-engraved diplomas signed by leaders of the profession, and therefore more dangerous to the community than a whole tribe of Indian "pow-wow-ers." These, indeed, assume the virtue of knowledge, though they have it not.

The United States government long ago adopted a similar plan of examining candidates for its army and navy medical services; so that at the present time its soldiers and sailors, even in distant territories and seas, have an average benefit of better-educated physicians than citizens of New York, Philadelphia, or Boston. An army or navy surgeon receives his education in any school, but he enters the Federal service only after an examination by a board who had nothing to do with teaching him, and who have no pecuniary interest in passing ignorant candidates.

A second advantage of the plan advocated is the improvement in registration that would take place. By the present law, persons who were in continuous practice for ten years prior to its enactment were allowed to register without diploma and without examination. Such persons, if any such still reside in the State unregistered, or if any new ones come into the State, would by the new law be required to show their qualifications for practice by examination. This would be a gain, as it would exclude a certain proportion of uneducated persons. Again, Section 4 of the Registration Law requires persons coming into this State with diplomas from other countries or States "to lay the same before the faculty of one of the medical colleges or universities of this commonwealth for inspection, and the faculty, being satisfied as to the qualifications of the applicant and the genuineness of the diploma, shall direct the dean of the faculty to endorse the same; after which such person shall be allowed to register." This imposes a considerable amount of work upon the medical schools, which, doubtless, would gladly be excused from this unpaid and uncongenial labor; for to reject the diploma or graduate of a neighboring institution lays the school open to unjust criticism. Moreover, the law does not state that the said colleges should be schools for undergraduates.

Some months ago, application was made to me, as Secretary of the Philadelphia Polyclinic and College for Graduates in Medicine, for certification of a man's qualifications for registration under this act. Undoubtedly post-graduate medical schools were not intended by the law, and I declined to act in the matter. Moreover, there are loopholes in the Registration Law by which punishment for practising illegally can be escaped. A notable case occurred six or seven months ago in Clearfield County, and is mentioned in an editorial published in the *Polyclinic* for March, 1884.

An exceedingly important result of the establishment of a State Examining Board in Pennsylvania would be the elevation of the standard of education in the medical colleges of the country. Many citizens and prospective citizens of the Keystone State study in the colleges of New York, Maryland, Ohio, Michigan, and other States. As soon as it is known that no one can practise in this wealthy commonwealth unless he passes the State examination, such persons will study in the highest-grade schools, and in those whose graduates show the smallest percentage of failures before the Pennsylvania Examining Board. Hence, if our schools are the best equipped and supply the best education, men will not pay their money to the teachers, boarding-house-keepers, and merchants of other States, but will attend our own schools, and thus increase the business prosperity of Pennsylvania. The

competition of low-grade colleges, whether in this or neighboring States, would not then tend to paralyze the efforts of institutions of high educational standard. There would be no longer a premium offered for quick graduation after two years' study and a five minutes' oral examination in each of seven branches.

Another indirect advantage would be this: that students could study in several institutions, and thus gain the benefit of hearing the foremost teachers of various schools, instead of being cognizant with the precepts of but one faculty. The former method of study is certainly the most elevating, as it broadens professional knowledge.

The division of labor resulting from examinations being held by a non-teaching board, having committees in different parts of the State, would make it possible to hold written and manipulative, as well as oral, examinations, and thus do better justice to candidates than is possible by an oral examination alone. Again, the examinations not being held all at one time of year would further accommodate intending practitioners and lessen the labor of the examiners. As it is now, the college faculties, with great inconvenience to themselves and often with injustice to the pupils, hurry through the examination of several hundred students in a few days. A gentleman now dead, who was for years a professor in a large medical school, once told me of a case where a man who failed to pass his examination was actually graduated because of a clerical error that occurred in the hurry of commencement time. Neither of us know how many people owed their deaths to that accidental physician. Bright men may have been neglected by similar errors made in hasty examinations. The State Board examination would be conducted leisurely, and, being partly written, would show by the records whether a man was unjustly rejected. He would also have the right to a public appeal from the report of the board, which now he has not. The college examination is, as it should be, under the present arrangement, the private business of a private corporation, and therefore sealed from public inspection.

Another advantage which deserves consideration is the power of revoking a man's license to practise which would be possible if a State Examination Board were instituted. His diploma cannot and could not be taken away, but his certificate of knowledge, character, etc., could be cancelled or withdrawn by the Board if he were convicted of criminal ignorance, malpractice or similar crime.

The last reason for advocating the law is cogent, but, to my mind, deserves little attention, because it is a selfish one, which should influence us much less than those previously discussed. Such an examination would weed out and keep out of the profession those persons who, though ignorant of medical science, accept professional duties and emoluments, and thus increase the difficulty of an educated physician's gaining a livelihood. There are, undoubtedly, too many physicians for the needs of the closely-settled districts. Fewer doctors and better ones would be a boon to most sections of the State. The State examination would effect both objects. The legal profession has, I believe, certain restrictions to indiscriminate admission to the bar. Why should not the medical profession have some similar protection?

Dr. Isaac Ashe speaks of districts in Scotland where sixpenny charges are made by physicians, and says he knows of an English town of fifty thousand inhabitants where one shilling charges are made for medical advice. ("Medical Politics," The Carmichael Prize Essay for 1873, page 33.) He quotes from the *Medical Press and Circular* of September 11, 1872, page 216, the following charges adopted by a practitioner of thirty years' experience: "Midwifery, two shillings and sixpence; advice, sixpence; consultations, one shilling." Is there a barrister in England or an attorney-at-law in Pennsylvania who accepts such insignificant fees for professional services? Yet the position of the medical profession in Pennsylvania is little better than that mentioned in England. The poor estimate put upon medical services is due to the overcrowded state of the profession and the inferior quality of much medical work, both of which conditions would steadily decrease after the initiation of a State examination.

That the medical profession desires the adoption of a State Examining Board may be assumed from the recent action of the Philadelphia County Medical Society. At a meeting of the present month, in which this and kindred educational topics were

discussed by college professors and practitioners, both general and special, the following resolutions were offered. After postponement for printing and circulation, they were adopted almost unanimously:

Resolved, That the Philadelphia County Medical Society believes that the status of the medical profession of this State will be elevated by the establishment of a non-teaching Board of Medical Examiners, whose certificate shall be the only one accepted by the prothonotary's office for physicians registering after January, 1886.

Resolved, That the other county societies of this State be requested to advocate the establishment of such a board at the next meeting of the State Society, and to discuss the matter prior to that meeting with the members of the General Assembly resident in their counties.

Resolved, That the Corresponding Secretary be directed to transmit a copy of these resolutions to the Secretary of each county society, with the request that immediate action be taken and reported to this Society.

Resolved, That a committee be appointed to draft a law creating a State Board of Examiners, for the examination of all persons for license to practise medicine, the said law to be presented at the next meeting of the Medical Society of Pennsylvania by the Philadelphia delegates to that meeting.

Having spoken of the advantageous action of a State Examining Board, I must hastily consider the objections that will be raised to its enactment.

It will be said that physicians living outside of this State, but near its border, are often called to attend patients in Pennsylvania. Very well; let them be examined by the Pennsylvania Board and register in the county of this State nearest their residences. Shall a physician of New Jersey, Maryland, Delaware, New York, or Ohio practise continuously in Pennsylvania without being subjected to the same examination as residents of this State? Certainly not. Those, however, who come into the State as consultants with duly licensed practitioners of this State should, of course, be excused from the State examination. So should dentists who do not practise medicine, whether residents or non-residents of the State. In the same manner midwives, who attend the very poor in cases of confinement, should be exempt from professional examination, though they undoubtedly should be registered and give some evidence of obstetric knowledge.

A physician changing his residence within the State would merely be required to register in his new locality, but would have to pass no second examination. Nor should those now legally registered and practising be required to pass the State examination.

It will be urged as an objection that there are physicians who desire to practise special systems of medicine, and that such a State examination would exclude these from practice. Not at all. Let the board examine all candidates on anatomy, physiology, pathology, hygiene, surgery, obstetrics, chemistry, and materia medica only, omitting theories of medical practice and therapeutics entirely from the schedule.

I have thus advocated, Mr. President and gentlemen, a measure which will, I believe, add to the wealth and prosperity of the State of Pennsylvania and elevate the profession of medicine, for whatever elevates the latter must increase the former. The wealth of a community is the health and lives of its citizens. Every useful life saved, every illness shortened, adds to the public treasury. The educated physician may do both, the ignorant physician does neither. I pray you to aid in cultivating the one and eradicating the other.

REPORT ON LARYNGOLOGY AND DISEASES OF THE NOSE.

BY CARL SEILER, M.D.

So much interest has been shown by the general practitioner in the success of the new treatment of hay-fever and rose-cold by the galvano-cautery, that a few words will not be unwelcome to the readers of the *Times*, although the subject is not a very novel one.

As is well known, hay-fever, as a disease very prevalent in America and England, has received a great deal of attention, and many papers and treatises have been written, in which almost exclusively the pollen-grains of this, that, or the other plant have been named as the cause of the trouble. A notable exception is found in the papers by Helmholtz and Salisbury, who ascribe the disease to vibrios and animalcules, and recommend solutions of quinine as a local application. The other authors, up to within a very few years ago, all recommended the removal of the patient during

the time of the attack to a locality which was free from the emanations of the particular plant affecting the patient. There are a few whose observations led them to believe that the hay-fever attacks were manifestations of a general nervous disorder, and recommended sea-air and nerve-tonics as the main elements in the treatment.

In 1882, Dr. W. Daly, of Pittsburg, published a record of some cases in which, after removal of nasal obstruction, the usual attack of hay-fever had not come on in the patients operated upon; and in 1883, Dr. J. O. Roe, of Rochester, read a very exhaustive paper on the causation and treatment of hay-fever before the New York State Medical Society, in which he demonstrated that the disease depended upon a peculiar sensitiveness of the mucous membrane of the nose, due in most cases to hypertrophic swelling of the cavernous tissue, but present in others without such evidences of nasal catarrh. Following up his theory, he employed the galvano-cautery knife for the destruction of this hypersensitive mucous membrane, and as a result gave the history of a number of cases cured by this method.

Since then, several other American and German laryngologists have published papers in which they substantiate Dr. Roe's observations as to the initial cause of the disorder, and add to the accumulating evidence of the effectiveness of his method of treatment.

There is, however, a slight difference of opinion as to the time when the application should be made, some claiming that a destruction of the irritated tissue during the attack is quite feasible and will cut short an attack, while most others hold the opinion that the galvano-cautery should be used either before or after the attack.

I have had ample opportunity to test this matter during the past season, and have found that the application of the galvano-cautery to the nasal mucous membrane after the attack had set in rather aggravated the symptoms, and in no way cut the attack short. On the other hand, I found that in those cases in which the treatment was begun before the onset of the disease, the attack was either prevented altogether, or, in a few instances, was greatly modified as to severity of symptoms and duration.

In one instance a single application, made two weeks before the time at which the attack was expected, in a case of twenty years' standing, proved sufficient to prevent any symptom of the disease from making its appearance. As I have frequently reiterated elsewhere, the application is not at all painful if properly made.

Two important subjects were discussed, among others, at the meetings of the Section for Laryngology at the International Medical Congress in Copenhagen,—viz., the use of chromic acid as a caustic in nasal diseases, and the use of inhalations in the treatment of diseases of the upper air-passages.

Dr. Hering, who opened the discussion, said that chromic acid was destined, in his opinion, to set aside galvano-cautery and other caustics, and could be used with great advantage for the removal of hypertrophies and pedicles of polypi. His method of application is to melt a small crystal of the acid to the end of a probe, and to touch with it the tissue to be destroyed, and then wash out the nose with a weak solution of bicarbonate of soda. He claims that the chromic-acid application is less painful and the wound made heals more rapidly than is the case with the galvano-cautery. Most of the gentlemen taking part in the discussion said that they had used chromic acid in the manner described or in concentrated solution (Boeker, of Berlin), but had found that the galvano-cautery was not in danger of being set aside for this reagent. The application of chromic acid in the form of crystals for the destruction of tissue in the upper air-passages is by no means a new departure, but it was used many years ago, and fell into disuse with the advent of the galvano-cautery. Lately, however, as it so often happens in medicine, that a forgotten remedy is again brought to light, this method of cauterization has received renewed attention by laryngologists, and Dr. W. C. Jarvis reported a very interesting case of large papillomatous growth of the larynx removed by repeated applications of chromic acid crystals at the meeting of the American Laryngological Association last spring. At the same meeting, Dr. Donaldson, of Baltimore, read a paper on the removal of nasal polypi by chromic acid. There are undoubtedly cases in which this caustic is preferable to the galvano-cautery, as in

Dr. Jarvis's case, but in most instances the galvano-cautery is preferable, not only on account of the greater facility of its application, but also on account of the freedom from all further destructive action after the knife has been removed.

Dr. Schnitzler, of Vienna, opened the discussion on the inhalation treatment, and expressed it as his opinion that inhalations were particularly useful in diseases of the upper air-passages, but were also valuable where the disease was located in the bronchial tubes and in the lung-tissue, where topical applications could not be made.

In the discussion, Gottstein, of Berlin, declared that inhalation was a method of treatment at once unscientific and often harmful, because the application could not be localized, and because frequently the convergent inhalation was prescribed in cases demanding early topical applications, and thus much valuable time was lost. Schaeffer, of Bremen, expressed the opinion that laryngoscopy would be more universally practised among general practitioners if the convergent inhalation method of medication did not seem to make the use of the laryngeal mirror superfluous.

There is a great deal of truth in the remarks of Gottstein and Schaeffer, for it is a deplorable fact that but too often inhalations of atomized liquids are ordered by the general practitioner without his having made a careful examination of the larynx, and without any reference to the condition of the parts. Nitrate of silver and astringent solutions are thus used indiscriminately. Gottstein, however, goes too far in declaring inhalations irrational, for, as Dr. Beschorner, of Dresden, in the same discussion, remarks, there are cases in which inhalations cannot well be dispensed with,—as, for instance, in diphtheria and in the sore throats of children; and at the same time the forcible inhalation treatment is found a most valuable addition in the treatment of chronic phthisis.

A short time ago, Dr. Bosworth, of New York, read a very interesting and exhaustive paper on the "Three Tonsils," at a meeting of the New York Academy of Medicine, in which he discusses fully the pathology of "quinsy" and the advisability of excision of hypertrophied tonsils. He entertains the view that in quinsy the tissue of the tonsil is not directly involved in the inflammatory process, but that the disease is, in reality, an acute cellulitis of the areolar tissue of the fauces, which later involves the tonsils secondarily. The cause he believes to be rheumatic habit in sixty per cent. of all cases, and the treatment consisting of salicylate of soda internally, based on this theory, was most generally successful in preventing suppuration and hastening resolution. As a local application he used bicarbonate of sodium, with gratifying results. In regard to hypertrophied tonsils, he advocated ablation of the glands, and said that the prevalent idea held by many practitioners, that cutting off a small portion of the tonsil would cause a shrinking of the rest, was erroneous. Hemorrhage was, as a rule, insignificant, particularly in children. The "third" tonsil, he said, was the collection of glands situated on the vault of the pharynx, variously designated by different authors as "adenoid tissue," "pharyngeal tonsil," etc. This collection of glands differs in nothing from the faucial tonsils, and is subject to the same pathological changes,—viz., inflammation and hypertrophy,—which should be treated in the same manner as when occurring in the faucial tonsils.

These views regarding the tonsils, and particularly as to the cause of tonsillitis, have been advanced of late by laryngologists and clinicians, and are gradually gaining ground; yet, at the same time, the percentage of those cases of quinsy caused by a rheumatic tendency seems to me somewhat too high, for in my individual experience I have met with but a few, and found the salicylate of soda in the other cases of no value whatever. In the same way did the bicarbonate of sodium, locally applied, give but very doubtful results in my hands.

Ergot in the Treatment of Constipation.—Dr. Granzio reports two cases of constipation following the abuse of purgatives relieved by ergot. Three doses of ten grains each were given at intervals of two hours, and were followed by a copious evacuation. A second stool occurred spontaneously the next day, and, after the administration of ergot in smaller doses for a few days, a definite cure was obtained. The constipation was due to atony of the muscular wall of the intestines. (*Allgemeine medicinische Central-Zeitung*, May 24, 1884).—*Practitioner.*

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINICAL REMARKS ON POST-TYPHOID ELEVATION OF TEMPERATURE.

BY J. M. DA COSTA, M.D.

GENTLEMEN,—I wish to call your attention to certain cases of post-typhoid elevation of temperature,—cases which cannot strictly be classed among those of relapse or of recrudescence of typhoid fever. It has happened to me to see, both in this hospital and in private practice, a number of patients who, after passing through the course of the disease, still retained a fever-temperature, or if, as is much more usual, the temperature had for a time resumed its normal status, it went up again, without a redevelopment of diarrhœa, the appearance of rose-spots, or the return of cerebral symptoms. I have seen it shoot up as high even as 105°, and almost as quickly go down again to the normal, or even below. It was only yesterday that I met a physician in large practice in this city in a case of a boy convalescent from typhoid fever, in which the temperature on two occasions went up suddenly to 105°, without there being any signs of relapse of the disease, and on both occasions there were no other manifestations of systemic disturbance, and the temperature soon went back again to normal.

In the case I show you this morning something of the kind happened. His history is a long one, of which I need only give you the outline. His name is Thomas T., 20 years of age, born in Ireland. He was admitted September 22, 1884, after five days' sickness with typhoid fever. He has been here for nearly three months. The temperature, with the usual fluctuations, returned to the normal at the end of four weeks; during this period he went through the regular course of a typhoid fever of rather more than usual severity. After he had passed the height of the disease, his recovery was delayed by an attack of milk-leg. When this had subsided and his temperature had become normal and had so continued for several days, he had a sudden rise of temperature to 104° one afternoon (November 3), but there were no other symptoms of disorder, and on the next day the temperature was 100°, and afterwards gradually subsided to normal. I find that the temperature again rose on the 20th of November to 101½°; subsequently it remained steadily high for nearly a week.

There is a class of cases, of which I have seen a number in former years of service in this hospital, in which there is a sustained fever-temperature after all the other signs of the disease have passed away and the patient is convalescent. In this class of patients I have seen the temperature fall from 100° to normal as soon as they were allowed to get out of bed. The temperature would apparently remain elevated indefinitely, without any other sign of disease, as long as they were kept in bed. This has taught me that in some cases, if you want to get them well, you must get them out of bed: too much coddling does harm. The sustained abnormal temperature makes the physician, nurse, and patient afraid, although all the other appearances are favorable. When the patient is allowed to sit up, gradually extending the time, the temperature falls.

There is another class to which I wish to direct your attention. Of course it is understood that elevation of temperature often occurs from indiscretion in diet: these instances I need not refer to further. I merely mention them to complete the series. In this man the first elevation I referred to was caused by reading a book, and that in the boy had a similar cause. The boy was of very impressionable nature, and, when a schoolmate called upon him and insisted upon seeing him after his attack of typhoid fever, he became very much excited after his friend had gone away, and cried for some time. That evening his temperature went up to 105°. Mental emotion, then, may be a cause of high temperature during convalescence from typhoid fever.

This does not, however, completely cover the case before you. I took the patient out of bed, forbade any excitement or mental effort, but the temperature continued high, although he had no diarrhœa or other symptom of disease. Examining the case repeatedly, I could find nothing but constipation that was amiss. Upon looking carefully for a cause why the temperature remained elevated, it occurred to me that it might be due to constipation; the fever-temperature being caused by irritation of hard masses

of retained fæcal matter in the intestine. I ordered this man a daily enema and one drop of the fluid extract of belladonna three times a day. This I had found in previous cases effective in correcting a tendency to constipation after typhoid, where irritating purgatives would be dangerous. Now, here the effect was very soon apparent. I have to report that the temperature fell to normal as soon as the intestines were freely evacuated, and has remained so. He now has a daily movement of the bowels, feels well, though still weak: his temperature is $98\frac{1}{2}°$. He is no longer confined to his bed.

TRANSLATIONS.

Treatment of Diphtheria. — The *Centralblatt für die Gesammte Therapie* mentions three varieties of treatment which have recently been brought forward. A solution of corrosive sublimate (one to ten thousand) is hourly applied to the throat, each time using a new feather (absorbent cotton upon a stick would probably answer the purpose very well), by Dr. Rudolph Canstatt, Uruguay. Dr. Moly reports excellent results from the following: on the first day every fifteen minutes, on the second day every hour, finely-pulverized camphor is applied by a brush, or with the fingers; at the end of forty-eight hours even the worst cases show striking improvement. He lost, out of one hundred and forty-three, only two cases, one of which was for too short a time under treatment, the other was refractory. Dr. F. Kuchenmeister recommends a treatment which he has used for twenty years. He dilutes Volquardt's mixture (℞ Sodii nitrat., Sodii carbonat., Aquæ, āā 2 G.) with water 100 and syrup 20. The sodium salts appear to act upon the blood, and especially its protein albumen, and also in such a manner as to reduce the fever. He also applies a sublimate solution locally several times daily, and uses lime-water (diluted three-fourths with water) as a gargle. The union of the lime-water with the sublimate is considered a favorable one, because the diphtheritic membrane is first dissolved, and the sublimate solution attacks the germs and destroys their activity.— *Deutsche Amerikan. Apotheker Zeitung.*

Treatment of Auricular Vertigo by Surgical Operation.—Weber Liel recommended, and has practised for a long time already, the section of the tensor tympani muscle as an extremely efficient means of treatment for certain attacks of vertigo due to ear-disorder. The following case (*Monatsschrift für Ohrenheilkunde*, 1883, No. 11) demonstrates very conclusively the value of this treatment in proper cases. A man 44 years of age, a clerk, suffered from intense degree of vertigo, weakness of hearing, and tinnitus, supposed to be the result of a blow on the head received in a fall while drunk. He could not walk even a few steps without staggering. Examination showed that the only appreciable lesions were in the auditory canal and the tympanic membrane of the right ear. Nothing was present to indicate that a cerebral cause for the vertigo existed. Rarefaction of the air diminished the tinnitus and the vertigo. Weber Liel then performed tenotomy by section of the anterior portion of the tympanic membrane. The success was immediate and striking. The patient was able to execute all the movements of the head rapidly and in all directions, turn in a circle, etc., without experiencing the slightest disagreeable sensation. Moreover, the noises in his ear, which had been so annoying as to keep him awake at night, became so much softer that they were quite bearable; and later it was found that his hearing had notably improved. The operation was performed in 1879, and the vertigo has never returned since that time. —*Annales de l' Oreille, du Larynx et des Organes connexes.*

A Clinical Test of Lead-Poisoning. —Dr. Du Moulin recently presented before the Académie Royale de Médecine de Belgique (*Revue Médicale*) a young man affected with saturnism, whose skin, when painted with monosulphide of sodium or sulphide of ammonium, gave a well-marked plumbic reaction. This test for the presence of lead in the system by testing the skin with an alkaline sulphide he referred to as a new and curious pathognomonic symptom which often appears earlier than the blue line on the gums, and as more characteristic and demonstrative than the latter. [This is in accordance with the observation of Dr. Pereira, that lead is eliminated by the skin.]

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 27, 1884.

EDITORIAL.

THE PROPOSED ACT OF THE LEGISLATURE CREATING A STATE BOARD OF MEDICAL EXAMINERS AND LICENSERS.

A BILL has been prepared for presentation before the Legislature of Pennsylvania during the present winter, having for its object the establishment of a permanent commission to be known as the State Board of Medical Examiners and Licensers, which shall have the power to pass upon the qualifications of all physicians seeking to practise medicine or surgery in the State of Pennsylvania after the 1st of September, 1886. As the bill has been framed with evident care by a Committee of Conference consisting of members of the Philadelphia Medical Jurisprudence Society, members of the Philadelphia County Medical Society and Pennsylvania State Medical Society, as well as from the Homœopathic State Medical Society of Pennsylvania, we will review its main points of interest.

There are several very good features in the proposed bill. In the first place, as to the constitution of the Board, it has been wisely, we think, provided that the Governor shall be restricted in his choice of the nine members to a list presented by the two chartered State medical societies, which shall nominate three candidates for each vacancy,—with the provision, however, that the proportion between the regular and homœopathic members shall be as seven to two. Five members, of whom one at least shall represent the Homœopathic Society, are to constitute a quorum. The only officer of the Board to be paid out of the State Treasury is the Secretary and Treasurer, who shall receive a salary (the amount to be fixed by the Board), and who shall give bonds for the faithful performance of his or her duties. The remuneration of the several members of the Board is to be paid from the fees received for examination, provided that any excess over and above seven hundred dollars each per annum, after deducting necessary expenses, shall be paid into the public treasury. The Board shall hold two stated meetings each year,—one at Philadelphia on the second Tuesday in May, and one in Pittsburg on the second Tuesday in November,—and, in addition, as many special meetings as it may deem proper.

The examinations must be in writing, and the papers must be preserved for five years, during which time they will remain open for inspection at the office of the said Board, which shall be in Philadelphia. The examinations shall be in anatomy, physiology, histology, general chemistry, pathology, therapeutics, principles and practice of medicine, surgery, and obstetrics. The fee for examination is fixed at twenty dollars; a second examination, in case of failure to pass the first, will be held without additional payment of a fee. All candidates are required to pass the same examinations, except upon principles and practice of medicine, upon which subject two sets of papers shall be prepared by the regular and homœopathic representatives upon the Board, the candidate to elect which he wishes to be examined upon. As each candidate is to be known only by a confidential number, it is believed that this will prevent any partiality, as the papers will be judged strictly on their merits. The records of the Board are required to be kept open for public reference, and a list of those candidates who have received licenses shall be published each year.

An important provision is that conferring the power to revoke a license: upon charges of unprofessional conduct being

brought and sustained by investigation, the Board of Licensers shall bring the case to the attention of the District Attorney of the county in which he or she may have practised, in order that the offender may be summoned to appear and show cause why his license should not be revoked. The court shall have the power to direct that such license shall be stricken from the list recorded in the office of the Prothonotary of the Court of Common Pleas for the county in which the said accused shall reside. An adequate penalty is provided for violations of this act. It is provided that any person violating the provisions of this act shall be guilty of a misdemeanor, and, if convicted, shall pay a fine of not less than fifty nor more than five hundred dollars for each offence. The clause in the Registration Act of June 8, 1881, referring to the endorsement of foreign diplomas by local medical faculties, is repealed and annulled.

This act, if it become a law, will only affect those who enter upon the practice of medicine in this State after the 1st of September, 1886.

Some considerations suggested by this bill are embodied in a leading article in another column.

THE NEED OF LEGAL CONTROL OVER MEDICAL PRACTICE.

THE series of papers which have appeared among our original contributions recently, notably those by Dr. Gihon, Dr. Jackson, Dr. Keyser, and Dr. Roberts, has presented the necessity of legal control over the practice of medicine in such a strong light that we had not intended to refer to it further; but we cannot forbear quoting a case which was before our courts last week, which, taken as a fact, demonstrates the correctness of the proposition more conclusively than pages of argument. A man in the northern part of the city died while under the care of a "professor" who makes and sells his own medicine. The widow called upon the professor for a death-certificate, when, she says, she learned for the first time that he was not a doctor and not entitled to sign a certificate. He was afterwards brought up to answer to a charge of malpractice, when he explained that he was formerly a real estate agent, had no medical education, and did not know that the law could prevent him from making and selling a medicine which he knew was good because it had cured him. The title of Professor he had adopted because he professed to make and sell medicine; he also had been in the habit of attending the sick when requested to do so. He was held by the magistrate to answer at court.

If anything were needed to discover to the world the contemptuous estimate which is put upon the responsibilities of medical practice by some in this community, and which derives at least tacit support from laws not sufficiently stringent, or inadequately executed, to prevent such an abuse, we think that cases like this would do it. For the protection of the reputation of Philadelphia as a medical centre something should be done to elevate the practice of medicine. Might not colleges of this city establish a board of censors, or regents, who could strive to have proper laws framed to protect the community from impostors, and be charged with the duty of seeing them enforced and offenders prosecuted in the courts? The New York County Medical Society has spent thousands of dollars in seeking out and punishing offenders against the medical laws. Will our County Medical Society be sufficiently public-spirited to spend some of its accumulated saving for the same good object?

WE regret to notice the death of Dr. James G. Thomas, an eminent physician of Savannah, while in attendance at the meeting of the General Committee of Organization of the Ninth International Congress at Washington.

LEADING ARTICLES.

ARE LAWS REGULATING THE PRACTICE OF MEDICINE CONSTITUTIONAL?

IT may be asserted, in objection to medical legislation, that, as the public in a free country has a natural right to choose its own medical advisers, an equal right exists on the part of medical men to practise medicine free from any restraint by law. Moreover, it has been claimed that laws restricting the practice of medicine really confer a franchise upon a certain class of men, thereby constituting class legislation, which is opposed to the spirit and letter of the Constitution of the State of Pennsylvania. It may also be urged that a law requiring a special examination and license before an applicant can be admitted to register as a physician and enjoy all the rights and privileges thereto pertaining is in itself inoperative and unconstitutional, at least so far as the college graduate is concerned, because the graduate in medicine has those rights and privileges secured to him by his diploma given under the seal of an institution acting under the authority of a charter by which it is fully empowered to confer such rights and privileges upon its approved students, and that the utmost that the State can do is to require a registration of the diploma and the payment of a fee. Finally, since the State accepts the diploma, if genuine, as an evidence of professional competency to practise medicine, as citizens of one State have all the rights and privileges of citizens of another State, it follows that the diplomas of schools in other States of the Union likewise confer the right to practise in Pennsylvania.

Without going into a general consideration of the increasing necessity of State supervision over those individuals entering upon the practice of medicine, we will merely state that this necessity will grow more pressing in proportion with the vigor with which medical laws are framed and enforced in surrounding States, thereby driving a horde of ignorant and unscrupulous pretenders to medical knowledge over our borders, to teach our people, by painful experience, the results of free trade in medicine. Unless some judicious legislation prevent, Pennsylvania seems doomed to become the Paradise of Quacks. Legislation, however, will be worse than useless unless judiciously framed and capable of being executed in the same spirit. That medical legislation can accomplish much good, if not all that the friends of reform desire in this State, may be considered as having been fully demonstrated by the labors of the State Boards of Health of West Virginia and of Illinois, the efficiency of which is universally acknowledged.

In reply to the objection mentioned at the beginning of this article, it is sufficient to say that the States do not recognize the right to practise medicine as a natural right, but always as one conferred upon the individual, a statutory right. This is proved by the fact that, in every State in which medical laws have been adopted, the right to practise medicine has been treated as one which has been conferred by the Legislature, and therefore may be controlled by statute providing for licensing to practise those who are found to be competent within its geographical limits, beyond which its authority does not extend. In fact, all who enjoy the right to practise medicine derive their authority to do so from the State, which may adopt a statutory provision requiring them to register, and it may also forbid their practising without a license.

The claim that such legislation restricting the practice of medicine to the hands of those who have given satisfactory proofs of their fitness is of the nature of class legislation, is so obviously untrue as scarcely to admit of discussion. The practice of medicine is not thereby confined to any particular class in the community, but remains free to individuals of all classes who qualify themselves for its duties by due preparation. It confers no exclusive prerogatives, and excludes only incompetency and ignorance, leaving the way open to all to attain the standard of qualification.

The third objection, however, demands a little more consideration. If there were no institutions in Pennsylvania possessing chartered rights to grant medical degrees upon persons possessing the legal qualifications to practise, the question would be a much simpler one to decide. If only physicians from other States were to ask for registration, the condition of affairs would be far different. For, as the power of a State to confer statutory rights and privileges is restricted to its own geographical limits, it follows that when a physician

emigrates from a State he leaves behind him such rights and privileges, and must submit to the regulations of the State in which he settles before he can enter upon the practice of medicine within its borders. With regard to those physicians who have diplomas from institutions outside of Pennsylvania, it is clear that the Legislature has the right to require them to obtain a license and give evidence of their fitness before being admitted to registration. But that such a course can be pursued in dealing with graduates of our own medical colleges is another question. An eminent jurist* has recently given a decided expression of opinion upon this subject, as follows: "The State may doubtless create a board of health or a similar body, and require every physician to register his license with the board, or in the office of the county clerk or other appropriate place. But his right to practise will not depend upon his registration, as the right has been already vested and assured by the diploma and license of the college. And, should the State also vest this board of health with the right and even duty of examining and licensing applicants, it could not apply to those who held a license from the incorporated colleges. Nor could it militate against or invalidate in any way the right of the colleges to issue valid diplomas and licenses, before or after; for not even can the State by its legislation divest or impair a vested right which the colleges already had."

If Judge McGary is right, then, if we wish to have a State Board of Examiners and Licensers, the law must be framed so as to exempt the graduates of Pennsylvania schools from examination for license. Possibly the incorporated colleges might be persuaded to establish a conjoint examination-board (thus relieving them of the task of examining their students) and grant their diplomas and licenses only to those who are approved by the Board. As several members of the faculties have been much interested in framing the bill above referred to, it is hoped that the co-operation of the medical colleges may be secured in the great work of medical reform, in which the colleges, as well as the profession throughout the State, are so deeply interested. The question whether the particular proposed law to establish a State Board of Examiners and Licensers is constitutional or not, is one that deserves and will receive serious consideration. Of the general right of the State to make such laws there can be no reasonable doubt.

* Judge McGary, of Washington, in an article entitled, "Are Medical Laws Constitutional?" in "Health and Home" for September 15.

NOTES FROM SPECIAL CORRESPONDENTS.

LOUISVILLE.

ENDEMIC OF TYPHOID FEVER.

MR. EDITOR,—About the middle of August last, cases of typhoid fever began to appear here and there throughout the western part of this city. The endemic reached its maximum about the 20th of October, and since then has been on the decline, though not rapidly. The number of cases that have occurred is not accurately known, but the best estimates place it at three hundred to three hundred and fifty. The mortality has been about twelve per cent. At a recent meeting of the Louisville Medical Society the cause of the disease, with particular reference to this city, was made the subject for discussion.

Dr. J. M. Clemens, as leader of the discussion, read a paper in which he said in substance, "It is known to you all, gentlemen, that the epidemic of typhoid fever which has been prevailing for the past few months in our midst is of such proportions as to challenge the very best consideration of the subject by our profession.

"In my own practice there have occurred, since the middle of July, sixty-three cases: judging from the stand-point of my own experience with the disease, I should think there had been fully three hundred cases occurring in this city up to the present time. The period of greatest activity was about the middle of August, though isolated cases have been occurring for several months. The type has been generally mild, although all grades have been represented, from the mild or walking cases to the severest. The clinical features have not differed from what is already known and recognized as common.

"As to the factors concerned in the causation of this outbreak, the opinions which I have previously held and repeatedly expressed have been strengthened by the conditions and surroundings found to exist in connection with the cases I have seen. I accept the germ-theory of this and other kindred diseases. I believe that every febrile disease which runs a definite course, which is marked by characteristic features and stages,

is due to a specific organism. I hold this as especially true of contagious and infectious diseases, as I believe it is held in common by a great majority of the best medical minds at the present time, though there is still a very respectable minority that does not concede it.

"The theory of micro-organisms, in my estimation, furnishes the only basis upon which the origin and known factors of the disease can be explained. Although cases arise that are not clearly traceable to a previous one, yet instances are so numerous where the connection has been traced, even through a mysterious chain of circumstances, to a previous case, that the weight of authority is now in favor of that hypothesis. There are strong reasons for believing that the decomposition of fæcal matter develops, increases, or intensifies what might otherwise exist as harmless organisms. These, according to M. Pasteur, once introduced into the human body, reproduce themselves indefinitely and are largely eliminated by the intestinal discharges. The investigations of Klebs, of Prague, enable him to bear strong testimony in favor of this theory. He believes he has discovered the organism of the disease: he writes that he has been able to find at the necropsy of twenty-four cases microbes in the various organs which do not exist in cases of death from other causes. In the light of this theory, the most rational explanation of the outbreak in this city is afforded.

"I have but to call the attention of the Society to the fact that, at the time when the site of the city was chosen, the whole of this district in which the disease has to the largest extent manifested itself was a marsh, and that at the present time many ponds still remain. The river, which in previous years flowed in the general direction which it still maintains,—viz., from northwest to southeast,—at the present sweeps around the city in a magnificent curve to again assume that general direction. If I am correctly informed, a well may be sunk at any point in this city to the common depth and water found; that depth varies from twenty-five to sixty feet. The underlying geological formation consists of strata as follows: earth, boulders, gravel, sand, and clay, followed again by boulders, gravel, sand, etc. The water-stratum in this boulder-bed and that of the gravel must have a very free circulation. Now, it is the custom in this city to sink privy-vaults into the earth, and a vault sunk short of the boulder-bed, in order that the fluid contents may drain away, is considered a very poor makeshift indeed. Upon an average, it may be said that to every public well for drinking-water in this city there are forty vaults reaching down to the boulder-bed to contaminate it, and many of these wells, in addition, are befouled by surface-seapage, the walls serving as a kind of conduit, carrying down filth on the outside, to be pumped up from the inside.

It is a fact that, of the sixty-three cases I have had, all the subjects, except one, habitually drank this pump-water, and that one exceptional case drank it occasionally. Of my patrons in this typhoid-fever district who use the hydrant-water, but one has had the disease. Is not this chain of circumstances, to say the least, suggestive? I answer, bearing in mind the formation of the vaults as given, and the unusual water-pressure to which the ground-water has been subjected during our floods of last and the preceding spring, that such a theory bears something more than the stamp of plausibility."

In discussing this paper, Dr. William Bailey said he was inclined to think, from the specific character of the symptoms and the well-defined clinical history of typhoid fever, that it is due to a specific cause. What this is—whether a micro-organism or not—he was waiting to hear from those prepared to investigate questions of that kind. When the proof comes, he will be ready to accept it. He did not think that causal relations had been established as yet between these forms of bacteria and the diseases in connection with which they are found, and at present he had not fully accepted the germ-theory of disease. He did not think himself qualified to get at the facts as to whether micro-organisms are causal or concomitant; whether they originate the disease, or whether they come as an after-clap; whether they are scavengers in the wake of the disease, or whether they act first to produce it. He was somewhat heretical concerning the contagiousness of typhoid fever, and even was scarcely willing to believe that one case of typhoid fever is dependent upon another for its origin. The first case of smallpox must have originated *de novo;* but at the present time he believed that no one would expect a case of smallpox to arise in that way. Typhoid fever, however, he was inclined to think, is due to a local cause, whether atmospheric or not he did not know; yet local conditions do develop the specific poison, whatever this cause may be. Whenever the conditions are present it is developed, no matter where, and all who are susceptible to the cause coming within its influence suffer from its effects more or less. There are so many cases of endemics that seemed so clearly traceable to other causes than contagion that it renders all doubtful.

He recalled a case where the disease broke out in a school, but, strange to say, it occurred only among the occupants of one side of the house. When an inspection of the local sanitary conditions was made, it was found there was a break in the pipe used for drainage for that part of the building.

He had no hesitation in saying there is no possibility of communicating the disease by direct contact from the sick to the well. If there is any contagion at all, it is due to what

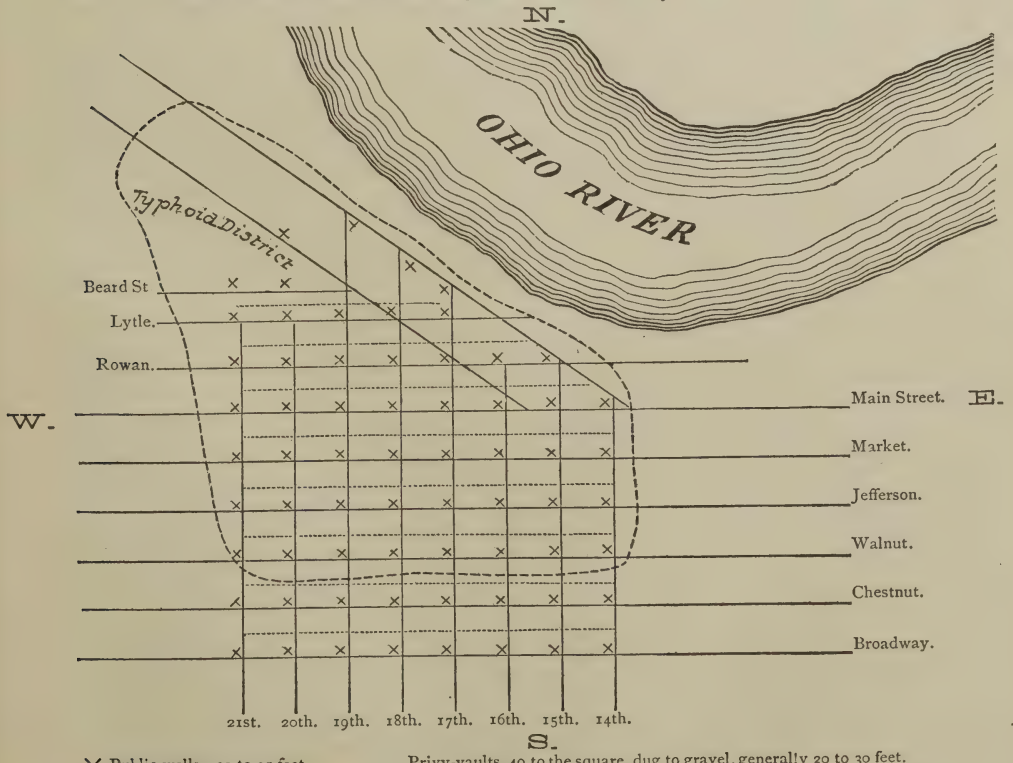
we recognize as miasmatic contagion, not directly from the sick to the well.

In concluding, he called attention to a paper read at the American Public Health Association recently held in St. Louis, by a distinguished sanitarian, Dr. Henry Baker, Secretary of the State Board of Health of Michigan, in which he took the position that typhoid fever was due to the lowering of the subsoil water; that typhoid fever is more prevalent in hot and dry falls, when the water sinks lowest in wells, and when poisons present in it must be more than usually condensed. This paper attracted a great deal of attention before this body of sanitarians.

The paper was discussed by Drs. Preston B. Scott, F. C. Wilson, J. Brandeis, Turner Anderson, and William Bailey, the speakers generally agreeing with the main points of the paper, although not considering the existence of a typhoid-fever germ as sufficiently established.

In conclusion, Dr. Clemens said he wished to dispossess the minds of many who have participated in this discussion that he had claimed that all these cases were due to the pump-water: other conditions and causes have long been recognized as productive of the disease. But, on the other hand, that many of them have received their infection from this source he did not doubt. The facts that have been elicited do not militate against the theory that these public wells are contaminated. He had simply brought forward these facts as such as to warrant him in the conclusion that the contamination of the water-supply had been mostly to blame for this epidemic. If this germ-theory be true, a gradual increase of the disease would be a reasonable deduction: that, as has appeared in the discussion, has occurred since the year 1880. That fact would also sustain the theory that the privy-vaults and their contents have acted as receptacles for the poison, in which to breed and intensify till a favorable condition for its development arises. Neither does it militate against this theory that cases have occurred in families that habitually use the hydrant-water, because in most families are children that go to school and are in the streets much of the time, and they no doubt, when thirsty, drink the water so kindly and conveniently provided for them on every corner.

At the conclusion of the discussion it was decided to continue the consideration of this subject at the succeeding meeting of the Society, following which the subject of the treatment of typhoid fever will be introduced in a paper by Dr. Turner Anderson. The following subjoined sketch of the condition of the city in the infected district may offer additional suggestions to those unacquainted with the city.



There seems to be a conflict of authority among the public health authorities. Yesterday, at a meeting of the City Board of Health, a communication from the Secretary of the State Board of Health, asking for a report of the precautions, if any have been instituted, against a possible outbreak of cholera within the year, was tabled, on the motion of the mayor, for the reason that the municipal Board of Health is an organization which is entirely independent of the State Board. This illustrates pretty well the status of the feeling of the City Board towards the State organization. The motley crew designated the City Board, when the subject of typhoid fever first began to attract public notice by its prevalence in this city, at first denied its existence to the extent reported, finally admitted its prevalence to the amount of three or four hundred cases, and then in the daily prints excused its wanton ignorance and neglect on the ground that it had no power to do anything, and that the people expect too much from the City Health Officer. The truth is, the people expect nothing from the City Health Officer, pay him two thousand dollars per annum for doing it, and—have their expectations fully realized.

The Secretary of the State Board of Health entered zealously into the work of investigating as far as possible the causes of the outbreak and the conditions probably perpetuating it. A report of his work will soon be before the profession. When this work was begun, the co-operation of the City Health Officer was solicited. The only response to this invitation so far made public was an announcement by the City Health Officer at one of the *séances* of the Board of Health that he and the small remainder of honorable members had never been *officially* requested to participate in this investigation!

COLLEGES AND HOSPITALS.

The medical college controversy between the representatives of the Louisville Medical College and the University of Louisville, consisting of Dr. Galt on the one side and Dr. Yandell on the other, appears to have had the effect of reducing the usual number of students in attendance at both institutions. The probabilities are that many of the charges brought against the Louisville Medical College by Dr. Yandell are true; on the other hand, Dr. Galt is doubtless a man of equal veracity, and no doubt many of the charges brought by him against the University are true. Each seemed to establish the charges he brought; whence very naturally follows the conclusion that no doubt both institutions might, with profit to themselves, the public, and the profession, be reorganized.

In the coming month the two spring and summer schools will open their sessions. Judging from the experience of the last two years, there can be little doubt that this is the most popular season for medical teaching in Louisville.

At the City Hospital a great deal of interest is created among the students who attend there, on account of the fact that at each clinic-day members of the faculty of two schools hold forth in the two consecutive hours. Professors Roberts, of the University, and Miller, of the Louisville Medical College, constitute the surgical staff for the winter terms, and Holloway, of the Kentucky, and Cartledge, of the Hospital Medical College, compose the staff for the summer terms. Holland, of the University, and Galt, of the Louisville, represent the medical staff for the fall and winter, whilst Marvin, of the Kentucky School, and Wilson, of the Hospital College, perform this duty in the spring and summer. Thus students enjoy the advantages of diverse methods of rival teachers during the whole school year, beginning late in September and extending till the last of June.

One of the most urgent needs at our City Hospital is the establishment of a ward for tubercular patients. In the light of recent investigations, it is wrong that individuals whose power of resistance to infectious disease, whose vitality, is temporarily lowered by suffering, should be constantly exposed to tubercular infection by association with the subjects of that disease. Another need, apparent to the most casual observer, is the establishment of a ward for incurable cases of uterine cancer. In every large hospital are to be found these cases, polluting the atmosphere and disgusting the olfactories of every one necessarily in their presence. The subject of such a disease cannot but feel that her presence is offensive to others, because she is offensive to herself. Among even the most hardened, this consciousness is productive of suffering, and it would be but merciful to allow them the seclusion that their cases demand.

The "constant-immersion" treatment of chronic ulcers, which constitutes a large number of hospital cases generally, has been instituted and maintained for a considerable time by Dr. Cox, one of the internes at the Louisville City Hospital. It is generally conceded that he is meeting with a success above the average by this plan.

In contrast to this, Dr. Marshall, one of his co-laborers, is treating another set of similar cases by the "salicylic-acid dressing." He is not behind his *confrère* in results. In a future communication I shall refer to this subject again.

At the last meeting of the Louisville Medical Society, Dr. W. O. Roberts presented a fibro-cystic ovarian tumor removed the week before from a girl 19 years old. This was his fifth case. Two cases only had died,—one of septicæmia, the other of peritonitis.

Dr. Turner Anderson opened the discussion on "The Treatment of Typhoid Fever." He laid especial stress upon the importance of early diagnosis and early treatment. He advocated the use of opium to produce sleep and to relieve restlessness due to cerebral anæmia, and considered quinine useless, if not injurious, in the course of the disease, only admitting it during convalescence. He favored alcohol in moderation (fʒiij during the day), and expressed disapproval of the specific treatment with calomel and iodine. In hemorrhage he relied upon elixir of opium and a large dose (fʒij) of spirits of turpentine. He did not believe in personal contagion in this disease, but considered the alvine discharges as containing the *materies morbi*. He uniformly disinfects them by the use of copperas and muriatic acid.

ALLEN KELCH, M.D.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held December 4, 1884, FORDYCE BARKER, M.D., LL.D., President, in the chair.

IS THE OPERATION OF TRACHEOTOMY IN DIPHTHERITIC CROUP DANGEROUS? WHEN SHOULD THE OPERATION BE PERFORMED?

Dr. JOSEPH E. WINTERS read a paper with this title. He said that the opinion that tracheotomy was a dangerous surgical operation he believed had no valid foundation, and should not be accepted with the confidence with which it seemed to have been received in this hall in March last. He quoted from Mr. Holmes, who represented the operation as a very dangerous one, but said that in one of Mr. Holmes's three fatal cases death was due to what would be called a too nimble tracheotomy, and in another complications arose from inserting the tracheotomy-tube into the cellular tissue outside of the wound, and he regarded comment upon Mr. Holmes's tracheotomies as unnecessary. Prof. Gross, in one part of his work on "Foreign Bodies in the Air-Passages," expressed his opinion of tracheotomy in the class of cases coming under the subject of the paper as very dangerous, and yet quotations elsewhere from the same volume showed that the author was contradictory in his own statements on this point, and it nowhere appeared in this work that he had ever performed tracheotomy for diphtheritic croup. Billroth, some years ago, at a time when there was no evidence that he had performed tracheotomy for diphtheritic croup more than a dozen times, had expressed an opinion that the operation in these cases was a dangerous one; but there was nothing in his more recent writings which would indicate that he any longer entertained this view.

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The author quoted from numerous writers on the subject of tracheotomy, particularly for diphtheritic croup, some of whom had lived in ancient, some in modern, and some in quite recent times, and in most instances the quotations went to show that tracheotomy in diphtheritic croup was not a dangerous operation. Trousseau had performed the operation two hundred times, without a single accident except in one case, in which the patient died as soon as an incision through the integument had been made. Bretonneau did not speak of the operation as a dangerous one, nor of skill in its performance as necessary to success. Barthez did not regard the operation as dangerous; and quotations to the same effect were made from West, Meigs and Pepper, R. M. Edwards, Mr. Lawrence, J. H. Pooley, Mastin, W. M. Parker, Chambers, etc.

Dr. Winters did not regard the entrance of a small quantity of blood into the trachea as dangerous; on the contrary, many operators recommended that a little blood be allowed to enter the trachea, in order that violent cough might be induced, which would expel viscid mucus and fluids.

The operation of tracheotomy in itself not being dangerous, nothing connected with its mere performance should deter us from resorting to it when indicated. In a large proportion of cases of diphtheria which terminated fatally, death was due to obstruction of the passage of air into the lungs, and the object of tracheotomy was to overcome this difficulty. When the operation failed to save life, generally the reason would be found to lie in the fact that it had been postponed too long a time, in complications existing in the bronchi or lungs, in sudden collapse, in asthenia, or in want of careful after-management. Suppuration in the anterior mediastinum, erysipelas and gangrene around the wound, and slipping of the canula into the tracheal opening had very seldom occurred. Even German writers, as well as others quoted, did not speak of diphtheria of the tracheal wound as more than seldom taking place.

As to the influence of the operation on the cure of croup, the admission of air into the lungs through an artificial opening into the windpipe secured for the diseased larynx entire rest, and thus led to a suspension of the diseased action there. In cases in which the patients had died from other causes than asphyxia some time after the operation had been performed, the pseudo-membrane was found to have disappeared from the larynx; but in cases in which death had taken place within a few hours after the operation the membrane still existed. It therefore appeared that in cases in which the patients got well after tracheotomy the restoration of the larynx to a healthy condition was rapid.

The author said that the diphtheritic process stopped at the level of the vocal cords

more commonly than was supposed, and when it extended into the larynx, trachea, and bronchial tubes it was by direct propagation from above downwards, and not by simultaneous affection of the entire air-passages.

If tracheotomy for diphtheritic croup was not dangerous, if it met the complication of obstruction to the entrance of air to the lungs, and was promotive of cure of the affection, if the specific disease was not aggravated by the operation, and the false membrane very rarely developed at the wound, the operation certainly brought with it no added element of danger; and the next subject which would come up for consideration was that of delay in its performance.

The author then quoted from Trousseau and others to show that a considerably larger proportion of patients upon whom the operation was performed recovered than of those who did not receive the benefits of tracheotomy. He could not conceive of a case in which delay would not be dangerous. We could gain nothing by delay, while the success of the operation would be largely interfered with thereby. When the rima glottidis was obstructed, less air entered the lungs. With every inspiration the lungs became less expanded, the circulation of the blood became embarrassed, imperfect oxidation produced violent constitutional disturbance, the entire body became cyanosed, passive congestion and œdema occurred in the respiratory organs; and yet it had been advised that these immediate precursors of death should be allowed to appear before resorting to tracheotomy. One might with as much propriety postpone herniotomy for strangulated hernia until after the development of gangrene, as to wait until this stage should be reached in diphtheritic croup before resorting to tracheotomy. In the majority of cases of croup the patient died of a want of oxygen. The object of tracheotomy was to render oxygen accessible to the lungs, and every breath of air which the child could take tended towards a cure. We should not, therefore, wait until the patient's strength had been exhausted in gasping and struggling for breath before resorting to tracheotomy.

He would resort to the operation as soon as ipecac and other ordinary remedies failed to produce relief from obstruction to the entrance of air into the lungs by the presence of membrane in the larynx. The tender age of the patient should not contra-indicate the operation, and, as in these cases the disease advanced with much greater rapidity, and as there was greater liability to bronchial and pneumonic complications, the operation should be resorted to earlier.

Prognosis.—Early age, previous ill health, especially chronic catarrh, bronchial and pulmonary changes, made the prognosis more serious, as did also measles, scarlet fever, and nasal diphtheria. When croup came on very early in the disease, making its appearance suddenly and producing marked obstruction, the prognosis was more serious. When the glands of the neck were much enlarged, the operation proved less generally successful. It was an unfavorable sign if the breathing did not become perfectly free and regular after the operation, as it indicated some obstruction below the artificial opening.

After-management.—This was more important than the manner in which the operation should be performed. Careful attention should be given to removing any obstruction to the canula. The patient's powers should be sustained by proper food and stimulants, measures should be adopted for subduing local processes, and attention should be given to the temperature and moisture of the room.

Dr. Winters said the general practitioner should not, in a case of threatening strangulation from croup, search for a surgeon to open the trachea, but should proceed to do it himself without any delay.

The following were some of the conclusions which the author had reached: 1. Tracheotomy of itself, performed with care, involved little, if any, danger to life. 2. Accidents during the operation generally resulted from want of care. 3. It prevented asphyxia, and thus gave more time for the administration of remedies and to enable the system ultimately to throw off the disease. 4. It prevented laborious and rapid breathing, thus tending to prevent exhaustion. 5. It allowed of a free supply of air, and thus assisted in curing the original malady. 6. It was a simple resource by which the condition of the patient was not likely to be rendered worse. 7. Having made a diagnosis, we should not hesitate and delay the operation, as this was the chief cause of failure in unsuccessful cases. 8. Operate slowly, deliberately, and without hurry. 9. Do not lay open the windpipe at one sweep of the knife. 10. It was seldom that either the constitutional condition or special causes contra-indicated the operation. 11. It alleviated suffering. 12. It mitigated symptoms. 13. It prevented complications. 14. It never added dangers to the original disease. 15. Statistics showed that nine-tenths of the cases requiring the operation suffocated without it. 16. No patient who had lived without the operation would have died with it. 17. The dictates of conscience, of facts, and of common humanity united in demanding the operation.

DISCUSSION.

Dr. J. WILLISTON WRIGHT, being requested to open the discussion, said he had never regarded tracheotomy as a specially difficult operation. He was perfectly well aware, however, that, undertaken (as it frequently was) in the middle of the night, in a tene-

ment-house, by the light of a tallow candle or a dirty kerosene lamp, and with such assistance as one could obtain under those circumstances, it was an operation which almost all surgeons approached with some sense of misgiving, especially as it usually occurred under those circumstances in the case of a young child having a short, thick neck and a deep trachea. These difficulties, however, were not so great in his judgment but that they might all be surmounted when they were taken in hand by a man who pretended to understand anything of surgery, coupled with a cool head and a steady hand. The incision itself was certainly a very simple one, involving, as it did, the integument, the fascia, the separation of the muscles on the front of the neck, when the operator reached a mass of connective tissue and veins. These veins, if wounded, frequently bled profusely, and, if the operator was impressed with the hemorrhage which was going on, and undertook to stop all hemorrhage (as was inculcated by many authorities) before opening the trachea, he would probably have a job which would occupy the remainder of the night. If the case was not urgent, it might be proper to stop some of the hemorrhage, even if simply venous. If the incision is made properly, arterial hemorrhage is seldom a troublesome complication in his experience. If, on the other hand, the case were one of emergency, where the great object was to effect an entrance into the trachea as quickly as possible, the child dying of asphyxia, then his custom was always to ignore this venous hemorrhage, and go on into the trachea, feeling very certain, as the speaker of the evening had stated, that hemorrhage would usually stop as soon as the trachea was entered or the tube introduced.

With regard to the entrance of blood into the trachea, he had regarded it as a matter of no special importance. It had, on the contrary, seemed to him sometimes to be the very thing which was needed to stimulate violent expulsive efforts, which would rid the trachea not only of the blood, but also of a quantity of mucus.

In the adult, he regarded tracheotomy as one of the simplest operations in surgery. In the young child it was much facilitated by placing under the back of the neck a common wine-bottle, wrapped in a napkin, allowing the head to hang over it, so as to render the trachea as superficial and prominent as possible.

With regard to the isthmus of the thyroid gland, in operating in emergent cases, in which saving time was the great element, he should be inclined to ignore it altogether, cutting through it with the knife. If time were not an important element, and the gland were in the way and contained a large vessel, he should of course take the precaution to surround the two sides of it with a ligature and divide it between them, as had been indicated by Dr. Winters.

As to the time when tracheotomy should be performed, he thought that, in order to be of much service, it should be done early, and he coincided entirely in what Dr. Winters had said upon this point. He did not think that the operation itself was in any sense a cause of death in membranous croup or diphtheria of the larynx. He was so strongly convinced of the importance of the operation that, if it were indicated and no surgeon were at hand, he would perform it upon himself with a pocket-knife, aided by the hand-mirror.

Dr. A. Jacobi said that much had been written upon the subject of the paper of the evening by many different writers, and Dr. Winters doubtless had recognized the fact that it would be impossible to cover the entire ground in a single paper; that being the case, Dr. Jacobi would limit his remarks to some points brought out in the paper, and would not try to discuss the entire general subject. The paper of the evening was a valuable one, and it would not detract from its value if he should venture to offer some criticisms upon it. The author had quoted extensively from European writers, both ancient and modern, with the principal object in view of showing that tracheotomy was not a dangerous operation, while but very limited reference had been made to American writers, some of whom—as Dr. Day, Dr. Hadden, Dr. Ripley, and others—had written papers containing much useful information upon this subject.

With regard to the dangers of tracheotomy, he thought the principal one was a bungling operation, and by that he meant a bloody operation. Hemorrhage was often due to the operator trying to get through with the operation as soon as possible. Tracheotomy should be performed deliberately, and the isthmus should not be cut through if the operator had as much as two or three minutes' time to spare. Many years ago he lost a case from hemorrhage by going directly through the isthmus into the trachea. The child would not cough up all the blood which had been allowed to enter the trachea. Even in a vigorous patient some of the fluid would be expelled ten, fifteen, or twenty minutes after the operation, and perhaps some of it would never be thrown up. Blood in the bronchi would have the same influence which so much viscid mucus would have in the same position,—namely, to prevent passage of air into the air-cells, which would cause them to contract, the blood-vessels to dilate, congestion, and broncho-pneumonia.

Another cause of danger was failure to administer chloroform. He preferred chloroform to ether, because the child could be brought more quickly under its influence. He knew of cases in which babies had died from struggling in the arms of the nurse,

who had taken them out of bed to make a simple nasal injection.

At what period in croup should the operation be performed? He was certainly of the opinion that after a diagnosis had been made we ought not to wait. He would not limit the operation to cases of membranous croup, but would also resort to it in those cases of laryngitis accompanied by stenosis of a congestive and œdematous type. He objected to dividing croup into stages in these cases, inasmuch as in some instances the operation was indicated quite early in the disease. He would operate in any case in which there was considerable laryngeal stenosis, recession about the supra- and infra-clavicular and ensiform regions, particularly if these symptoms increased in the morning; and if the pulse were becoming frequent and irregular he should say it was high time to operate. He should not ask, in such a case, whether there were membranous obstruction. Could we do anything in cases in which there was constitutional diphtheria or diphtheritic sepsis? He should reply, Most decidedly. He would operate in these cases particularly, because as soon as the trachea was opened the child would cease to breathe the poisonous and fetid odors coming from the larynx and nose.

Dr. Jacobi then directed attention to the use of bichloride of mercury for the prevention of the necessity of tracheotomy in croup.

As to the causes of death after tracheotomy, they might be the same as those which would have caused a fatal result had the operation not been performed; but the principal causes of death after the operation were broncho-pneumonia, œdema of the lungs, and descent of the diphtheritic process.

Dr. J. Lewis Smith said that the older the child, other things being equal, the less the dangers after tracheotomy. It seemed to him that there were two conditions in which tracheotomy was specially dangerous, the one being that state in which the patient was nearly moribund and the surgeon was induced to operate hastily without due precautions against hemorrhage. He thought that in the city, where assistance could always be had, the physician should not undertake the operation alone; but assistance might not always be accessible in the country. He fully agreed with Dr. Jacobi, that the degree of laryngeal stenosis, and not necessarily the presence of pseudo-membrane in the larynx, should govern us in performing the operation. He would divide the cases of membranous croup into two classes, as based upon the necessity for an early or a later operation. If the laryngeal pseudo-membrane in diphtheria developed early in the disease, it would be found to form more rapidly than if it developed, say, at the end of a week, and tracheotomy should be performed immediately; but in the other class of cases the membrane developed more slowly, and there he would try to prevent the necessity for tracheotomy by first using alkaline inhalations, or inhalations of tripsin, and by the internal administration of mercurials. Tubage had been employed with some success in the New York Foundling Asylum.

Dr. J. H. Ripley had been interested in the paper, particularly as the author had taken a position quite antagonistic to that which he had held. The author's ideas regarding the dangers of the operation, its difficulties, consequences, and more especially the consequences of a late operation, were all opposed to his own views. The question was not whether tracheotomy was a difficult or a dangerous operation, but whether tracheotomy in young children for croup was a difficult and a dangerous operation. So far as the operation of tracheotomy in general was concerned, Dr. Ripley would say that it was neither very difficult nor very dangerous. The danger consisted, first, in the condition of the child, and, second, in the necessity for doing the operation within a given time. Dr. Winters, he believed, had touched upon only one danger,—namely, hemorrhage. Dr. Ripley did not regard hemorrhage as the most common cause of death. We had to deal with children suffering from systemic poisoning, stenosis of the larynx, the cellular tissue of the neck infiltrated with the products of inflammation,—sometimes swollen out even with the chin,—and in order to get at the trachea we had to go down, perhaps, two inches, which required a good deal of time and a good deal of care, and before the operation was completed the child was liable to die from syncope; if the stenosis were great, and chloroform were given, the child was liable to die of apnœa; if chloroform were not given, the child would die from struggling. He was willing to go with the small minority, which included such names as Holmes, Gross, and Billroth, and say that he regarded the operation as dangerous. He had performed tracheotomy about one hundred and ten times, and had seen it done by other men about fifty times, and he had witnessed all kinds of complications, and thought he had been the means of saving several lives by being present when inexperienced persons were operating. He had known ten deaths occur on the operating-table, the operations being performed by seven men, four of whom were surgeons of care and experience. He knew of one instance in which the operator plunged the knife into the spinal column; in another it was plunged into the œsophagus, and in a third it was plunged quite through the trachea at one side of the median line.

Dr. Winters had advocated early operations, but, as Dr. Ripley had before said, the man who operated early would have the best success, not for the reasons given by the author, but for the reason that unnecessary

operations were those which were, as a rule, done early. We often have to watch the case closely for two or three days before a differential diagnosis can be made. It was true, as Dr. Jacobi had said, that there were a few cases in which it was necessary to do tracheotomy for stenosis occurring in the course of laryngitis. There were also a certain number of cases of croup which would recover without treatment; and hence it was that there had been so many specifics for this disease.

If late operations were the cause of death, then the causes of death must be those which Dr. Winters had spoken of,—pneumonia, extensive bronchitis, infiltration of the lungs and of the bronchi. But Dr. Ripley thought that if any fact in scientific medicine could be demonstrated it was that incomplete stenosis of the air-passages above the air-cells produced not congestion of the lungs, but anæmia. The air-vesicles were in a state of acute emphysema, and if this were true delayed operations would not prove dangerous on account of broncho-pneumonia, which was liable to follow. The causes of death, according to his observations, were extension of the membrane into the bronchi and consequent suffocation, nephritis and uræmia, respiratory and cardiac paralysis. He did not know that carbonic acid poisoning would cause an extension of the membrane into the bronchi.

Dr. WINTERS, in closing the discussion, said, with regard to danger from blood entering the tracheal wound during tracheotomy, that such danger could be absolutely avoided by properly performing the operation. The scalpel should be laid aside after incising the integument, not to be used again until the tracheal cartilages had been laid bare by careful dissection with two pairs of forceps, dividing any tough bands with dull scissors. He thought the views of Dr. Jacobi regarding the dangers of blood entering the bronchi were those first advanced by Niemeyer many years ago, which were not accepted by advanced pathologists at present, and which were abandoned by Niemeyer himself before his death. If any blood should enter the trachea, it should be removed, together with whatever mucus might be present.

He had not supposed that there was any question of the propriety of using an anæsthetic in tracheotomy for croup, nor as to a choice between chloroform and ether. Another reason in addition to those offered by Dr. Jacobi for preferring chloroform was that ether is irritating to the air-passages.

As to bichloride of mercury, referred to by Dr. Jacobi, he did not believe that it could be introduced into the blood in sufficient quantity to act as a germicide or as an anti-fermentative, and the only influence which it exerted was as a tonic, and for this purpose it would never supersede iron.

As to death from extension of the pseudo-membrane into the bronchi after tracheotomy, he did not believe that any autopsy had ever been made which would tend to show that tracheotomy had caused an extension of the diphtheritic process into the lower air-passages; and in those instances in which the membrane had been found in the bronchi at the autopsy after tracheotomy, death had taken place too soon for the membrane to have developed after the operation.

As to tubage of the larynx, it had been mentioned by Hippocrates. and had been at one time resorted to considerably in France, but had been entirely abandoned.

Deaths on the operating-table were due either to late performance of tracheotomy or to carelessness.

Dr. Ripley's statement that stenosis of the air-passages above the air-cells would not produce congestion with its results would not bear examination. Any one familiar with the physiology of the circulation knew that as soon as there was embarrassment of the respiratory act there was embarrassment of the circulation in the lungs, which caused damming back of blood upon the heart; with lack of aspiration-force from inspiration there was stagnation of the blood in the blood-vessels, and post-mortem examinations in croup showed passive congestion, the accumulation of mucus in the bronchi, pulmonary collapse, and, a little later, congestion of the lungs, pulmonary œdema, and the changes of broncho-pneumonia. Dr. Ripley had also spoken of croup being analogous to asthma and emphysema, but Dr. Winters said that they were not analogous conditions at all. He had found but a single case recorded in which it was claimed that there existed a certain amount of emphysema, the result of laryngeal obstruction, in croup, and in that case it would appear the autopsy had not been made with care.

Dr. LOUIS ELSBERG wished to say that Prof. Gross only taught that tracheotomy under the circumstances in which it was sometimes necessary to perform it—not the ideal operation—was not always free from danger. He heartily sympathized with the general views expressed in Dr. Winters's paper.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, November 13, 1884.

The President, Dr. SHAKESPEARE, in the chair.

Some studies on the micrococcus of the pleuro-pneumonia of cattle. By THOMAS D. DUNN, M.D.

ON September 25, 1883, through the kindness of Dr. Bridge, Assistant State Veterinary Surgeon, and Mr. Thomas Edge, Commissioner of Agriculture of Pennsylvania,

I was invited to be present at an autopsy on some cows suffering from pleuro-pneumonia. Their condition being such that recovery was deemed impossible, Mr. Edge ordered them killed. As a description of the macroscopic and microscopic condition of the lungs was read before this Society a year ago, and as it would have no special bearing on the bacterian nature of the disease, a detailed account will be omitted. Suffice it to say the lung was completely solidified, the air-cells filled with effused blood, serum, and lymph, which usually extended into the small bronchial tubes. Portions of the consolidated lung and blood from the heart were placed in a bottle which had been thoroughly cleansed, and the bottle closed with a ground-glass stopper. These were examined microscopically by Dr. George Martin and myself, and were found swarming with germs,—micrococci. These little bodies, although seen distinctly with a power of 670 diameters, are best studied with a power of 1000. They are colorless, globular or oval in form, outline regular, and refractive power notable. Brownian movement was marked. They did not seem to move independently. They measured from a third to a half micro-millimetre (or from $\frac{1}{8000}$ to $\frac{1}{6000}$ inch) in diameter. They are not dissolved by either alkalies or acids, and take the staining of aniline colors slowly. I have, however, succeeded in staining them by first treating with aqua ammoniæ, then with staining-fluid, and afterwards washing with a weak solution of nitric acid. They have recently been more satisfactorily stained by a two per cent. alcoholic solution of methyl violet. They multiply in nitrogenous culture-fluids at ordinary temperatures by millions. They are generally separate, though sometimes united in pairs and little cellular colonies, forming distinct zoöglœa. From the fact of their being occasionally seen in pairs, it is reasonable to suppose that multiplication is taking place. They resist putrefaction, for the cultivation-tubes started September 26 swarmed with them two months later. When the nitrogenous material is exhausted, their growth is stopped, and they remain in a latent state, as it were, until additional food is given or they are transplanted into fresh fluids. After the tubes stand a few weeks, the membrane formed on the top sinks to the bottom, and the liquid above clears. That they are not dead, but only in a state of repose, is evident from the fact that they multiply anew when inoculations are made from them, but less rapidly than inoculations from more recent cultures.

Dr. J. J. Woodward, U.S.A., presented at a meeting of this Society in 1861 a pleuro-pneumonic lung, and mentioned certain "spores of fungi" found in both the healthy and diseased lung, but he did not describe them. These "spores of fungi" are probably the micrococci under consideration. Aside from this I have not found any record of them, but, unfortunately, I have not had access to the literature pertaining to this subject.

The following culture-experiments were made with the serum virus taken from the diseased lung. The culture-fluid consisted of extract of fresh beef, made by chopping it fine and pouring over it hot water. After maceration the juice was expressed and the extract boiled for several minutes. It was then filtered, and again boiled to thoroughly destroy all germs. It was then placed in culture-tubes which had been washed in a solution of corrosive sublimate, and afterwards boiled. The tubes were closed by absorbent cotton which had been sterilized with corrosive sublimate and the application of dry heat. After the culture-fluid in the tubes had cooled, a minute quantity of the serum was introduced by a small knife whose blade had been heated in a spirit-lamp. The tubes were then placed where the temperature ranged from 90 to 120 degrees Fahrenheit. On examination of these tubes on the 28th, the liquid was found turbid, a thin membrane formed over the surface, and there was a slight deposit. Under the microscope thousands of micrococci were seen. From this cultivation a second was made, and, after standing forty-eight hours, the surface membrane, cloudiness of fluid, and slight deposit appeared, and myriads of micrococci were found. From this a third generation was started, in which appeared a few bacilli, the first discovered.

These are very active, colorless bodies, measuring from three to five micro-millimetres in their long diameters, and from one-third to one-half micro-millimetre in their short. Their movements are at times rapid. Sometimes, after remaining a long time motionless, one will suddenly dart across the field of the microscope, setting many of its fellows in motion, who seem to catch the spirit of the active bacillus. At one time they advance with the rapidity of an arrow, then retreat or describe circular lines. It was noticed in those cultivations in which the bacilli were found that the surface membrane was thicker and more tenacious. In cultivations conducted at a lower temperature the development of micrococci was not so rapid. Fearing that some atmospheric germs might have been introduced with the culture, other cultivations were begun from the second generation, in which no bacilli were found. The culture-fluid was boiled at intervals, to kill germs that might develop from spores not destroyed by previous boilings; and, as a further test, non-inoculated tubes were placed by their side. In forty-eight hours the former were swarming with both bacilli and micrococci, while the non-inoculated ones remained clear for ten days. These subsequently developed germs after inoculation. A second series of observations was commenced with fresh virus, obtained October 4. The first and second

cultures were pure, but in the third bacilli appeared, and in the fourth they had greatly increased. It is difficult to explain the relation these forms bear to each other, whether or not the bacilli are organisms developed from the micrococci: the latter being in a sporal stage of their growth, our investigations will not justify a positive answer. Koch has determined that the bacilli of anthrax develop veritable spores, and they in turn develop bacilli. Several other observers hold this view, and, according to the investigations of Koch, Cohn, and Pasteur upon the development of bacteria, it is probable that the spores of bacilli and other bacteria are identical with micrococci in form, aspect, and behavior towards chemicals. In those diseases in which certain bacilli and micrococci are found to be the virus, it is impossible to distinguish them from harmless ones by their microscopical appearance; that is, a specific disease-germ can only be determined by its effects on living organisms. The micrococcus of pleuro-pneumonia, so far as present observations go, is identical with that of diphtheria, chicken cholera, and the recently-discovered micrococcus of scarlet fever. It is further found that the germ of virulent matter rendered harmless by attenuation does not differ microscopically from the unattenuated which destroys life. I have made no inoculations on animals with the micrococcus of pleuro-pneumonia, but a few cows have been inoculated by others without any reference to a special virus or cultivation of the germ, and the disease was transmitted. However, several experiments have been made, in view of destroying the germ, the results of which I will briefly state. A tube containing cultivated micrococci was boiled, and from it a second was inoculated. In thirty-six hours the tube contained many micrococci, showing that the germ is not destroyed at 212° (F.). A culture-fluid to which had been added ten per cent. of alcohol was then inoculated. No micrococci had developed one week later. One and one-half per cent. of benzoic acid, with borax to dissolve, was then added to a culture-fluid; neither micrococci nor bacilli had appeared six weeks afterward. Another culture was started, to which was added corrosive sublimate in the proportion of one-half grain to the ounce. In three weeks there were no traces of germ-life. To test the influence of cold on these organisms, a tube containing cultivated germs was frozen, and from this sterilized liquids were inoculated. In forty-eight hours they contained myriads of micrococci and a few bacilli. A portion of diseased lung was frozen, and inoculations from this grew in about the same time. It was afterwards found that the cotton which had been sterilized by heat and corrosive sublimate had been inadvertently exposed to old cultivations and decomposing organic substances, and it is possible that bacteria were introduced by it. When I repeated these experiments, it was found that, while inoculations from non-frozen virus develop micrococci in a few hours, it requires several days for sowings from frozen specimens to grow in the same culture-fluid, and under the same conditions of temperature. Whether they were not exposed to cold long enough to destroy the germs, or the influence is only sufficient to render them inactive, further investigations will be required to determine. It is my impression that cold will check the spread of the contagion, but will not destroy it altogether, and that when the disease once attacks an animal cold will have no influence upon it, though it may prevent the spread of the infection to others in the same herd. The power of medicinal agents to control the disease seems to be very feeble. It would appear that corrosive sublimate, alcohol, and benzoic acid arrest the growth of these germs; but whether doses sufficient to destroy them can be administered without endangering life, our veterinary surgeons must determine.

DISCUSSION.

Dr. SHAKESPEARE said that he had read of two attempts within the last year or two to isolate the micrococcus of this disease. Bruylants and Ferree united in an attempt of this kind, and have reported (*Bull. de l'Académie Belgique*, 1880) that they found a micrococcus constant in the pleuritic and alveolar exudate. More recently the report of Poels and Nolen, of Rotterdam, has appeared, in which they describe the isolation and culture of many generations of micrococci. Moreover, they have compared them with those of human pneumonia, claiming their identity morphologically and with regard to their mode of growth, and a further identity as to the results of inoculation, their experiments showing that pleuro-pneumonia in cattle has been produced by inoculation of the cultures of micrococci from human croupous pneumonia, as well as by inoculation of cultures from the pleuro-pneumonia of cattle. The latter report is published in the *Centralb. f. d. Med. Wiss.*, No. 9, 1884.

Dr. FORMAD said that this micro-organism had also been seen and described by Veterinary Surgeon Lyman, who had presented a very elaborate report to the Department of Agriculture. Dr. Quile also, both a medical man and a veterinary surgeon, had worked in pleuro-pneumonia for two years in the Pathological Laboratory of the University of Pennsylvania, always finding the micrococcus present, and in pure cultures kept up for many generations he had not observed any other bacteria. He had inoculated two calves with large quantities of the culture, and had failed, whence he had concluded that the micrococcus was not the cause of the disease. He remarked as a fact in favor of the micrococcus being the cause of the disease that these or-

ganisms are chiefly found in the lymph, and that in pleuro-pneumonia enormous lymph-spaces are developed in the lungs, which are filled with a grumous liquid containing micrococci in large numbers, while the contents of the alveoli contain very few micrococci, but swarm with other bacteria.

Dr. DUNN, in his concluding remarks, said that one point of interest had been omitted in his paper, which was, that the cattle from whom the specimens had been obtained had been first knocked down, then bled to death, and buried superficially in a field through which flowed a stream from which neighboring herds were watered. In a few weeks the disease appeared in these cattle also. As to the literature of the subject, he had not access to sufficient to familiarize himself with any investigations made by others. Some experiments with reference to inoculation have been successfully made in France and England. The lymph was introduced into the body and tail, and was found to protect the animal from the disease. When the virus was inserted into the tail with proper precautions, the mortality from the operation was less, being from one to two per cent. It was also found that when the tail became greatly inflamed it could be removed to limit the inflammation, and still afford protection to the animal. Inoculated animals did not communicate the disease.

A case of old ununited fracture of both bones of the forearm. Presented by CHARLES MEIGS WILSON, M.D.

This specimen was taken from an arm amputated about the middle of the humerus. Eight months previously the girl had fallen from a window and sustained an oblique fracture of the ulna and radius, that of the ulna being about an inch and a half, and that of the radius two inches and a half, below the elbow-joint. The arm was the seat of several large ulcers, and many sinuses were present. The probe detected dead bone. The specimen shows that there has been no attempt at union in the radius, but that the comminuted fragments, being attached to periosteum, have not been destroyed. There has been slight union of the ulna. The cartilages have been destroyed. The joint contained pus, and the internal condyle of the humerus showed a carious condition. The patient made an excellent recovery after the operation.

A specimen of tumor of the bladder was next presented by Dr. J. H. MUSSER.

Case of multiple ovarian fibro-cysts, with subperitoneal fibroids and general (tubercular) peritonitis. Presented by Dr. H. M. FISHER.

Barbara K., æt. 40, married, born in Germany, was admitted into the Episcopal Hospital early in July. Her father died of a tumor in the axillary region, one sister of paraplegia at the age of 16, and one brother and one sister are still alive and healthy. She married early, and had three children. Of these one lived but one day, one died at the age of 12, of "dropsy," and the third (a boy of 18) is still living. Two weeks after the birth of the last child she was obliged to get up and make severe muscular exertion, actually laboring in the fields. Soon after this she noticed that she was losing blood per vaginam, and that she could no longer nurse her child. This bleeding appears to have recurred at intervals of two weeks for a year or more, and often amounted to a positive hemorrhage. Notwithstanding that this was the case, and that she had occasional attacks of severe pain, she continued to work as usual until three or four years ago. Three years ago she came to this country. At about this time she noticed a lump in her left groin, and from this time her abdomen steadily increased in size, she was seldom entirely free from pain, her appetite failed, and her bowels were habitually constipated.

Status Præsens.—Patient is anæmic, and has a careworn, haggard look. Abdomen much distended. Distance from xiphoid to umbilicus two inches greater than from umbilicus to symphysis. Percussion clear over abdomen anteriorly, dull in flanks; fluid moves freely with patient's movements. Hepatic dulness begins in third interspace in mammary line, but not apparently increased in width. Examination of heart reveals a faint systolic apex-murmur. Examination of lungs gives negative result. Much dyspnœa. The dyspnœa becoming urgent, she was (July 14) tapped in the median line, two inches below umbilicus, and eight quarts twelve ounces of a straw-colored fluid rich in albumen were removed. Immediately after the tapping an exceedingly hard mass was noticed in the left iliac region, apparently of the size of a turkey's egg. On the 23d she complained of much pain in the left leg, and the tissues were noticed to be œdematous. This œdema was only slightly relieved by several punctures which were then ordered to be made. From this time till her death patient complained much of dyspnœa, hypogastric pain, and obstinate constipation. She was tapped time and again, and on each occasion a large amount of straw-colored fluid was removed. September 21. Patient had a sudden attack of severe dyspnœa this evening, and died in ten minutes.

The post-mortem examination was made by the resident physician, Dr. J. K. Mitchell, sixteen hours after death, who furnished me with the following notes: "Drew off fourteen quarts of fluid from the abdominal cavity by trocar and canula, all clear and straw-colored. On reinserting canula, a small quantity of dark-brown fluid, looking like beef-tea, came through. The belly-walls were very thin; peritoneum everywhere

much inflamed; whole intestinal surfaces and peritoneum covered closely with small whitish or pinkish points of tubercle; glands not very much enlarged, but very hard; omentum as thick as one's hand, and of an almost wooden hardness and stiffness. Liver and kidneys apparently perfectly healthy. Two cysts in the broad ligaments of the uterus, the larger one about the size of a base-ball or less; one had been tapped by the canula, the other contained about four ounces of the same brown 'ovarian' fluid. The ovaries macroscopically seemed healthy, and the uterus was normal in size and position. The lungs, though much compressed, showed no signs of disease and no adhesions. The heart had also been forced with the lungs upwards, otherwise nothing wrong with it."

A subsequent examination of the specimens brought the following facts to light. The uterus is decidedly hypertrophied, measuring about four inches internally, and appears abnormally hard. Closely attached by false membranes to the lower part of the body of the uterus, upon the right side, there is a hard fibrous nodule of the size of a pigeon's egg. A somewhat larger mass, of similar character, is seen higher up and to the left of the uterus. The right ovary is enveloped in false membranes and closely adherent to the fundus of the uterus. The left Fallopian tube opens directly into the larger cyst of which mention has above been made. This has at its base a fibrous nodule (about two and one-half inches by three-quarters of an inch), which is covered on its under surface by a mass of false membrane. (This is probably the mass that was detected during life in the left inguinal fossa.)

In addition to the cyst above mentioned, there were two other much smaller cysts, but I found it impossible to make out the exact relations of these to the other cysts without making a careful dissection, and this I failed to make. None of these cysts appeared, however, to be connected, as was stated above, with either broad ligament. The left broad ligament was found to be perfectly free; the right was wanting, but appeared to have been removed during the autopsy or subsequently.

The case is a complicated one, but the sequence of pathological events appears to have been the following. The patient, having made severe muscular exertion a fortnight after confinement, is attacked by perimetritis and metritis. This inflammation, at first acute, soon becomes chronic in consequence of the patient being unable to get proper care and the rest that she required. Whether the subperitoneal fibroids from which she was found to have suffered had been already developed at the time this acute pelvic inflammation occurred, it is impossible now to say; but it is probable that they were of later development. Coincident with the periodical hemorrhages and attacks of pain that the patient now suffered from, fresh portions of the pelvic peritoneum are invaded. Finally the peritoneum adjacent to the ovary is reached, and a peri-oöphoritis is the result. The inflammation of the peritoneal investment of the ovary extends, as Heitzmann states, to the ovary itself, causing a proliferation of connective tissue on the cortex of the organ, and from here to the adjacent connective-tissue stroma. In this way the bursting of a ripened follicle may, as he says, be prevented, and a path may be opened for the formation of an ovarian cyst. Supposing this to have occurred in this particular case, we may easily see how the connective-tissue proliferation may have gone on hand in hand, as it were, with the cystic degeneration of the ovary, until the whole ovary was converted into the multiple fibro-cyst that we see in the specimens.

The inflammation extended but slowly from the pelvic to the general peritoneum, probably because the products of inflammation were for a long time in great measure circumscribed by false membranes. Little by little, however, these products were taken up by the lymph-channels, until finally the whole peritoneal surface was infected by them. The occurrence of general peritonitis probably did not antedate much the occurrence of the abdominal dropsy, three years ago, as before that time the patient, though occasionally incapacitated for work by pain, was still able to attend to her usual occupation during the greater part of the time.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held December 10, 1884, Dr. Van Gieson, Vice-President, in the chair.

ROUND CELLED SARCOMA OF THE UTERUS.

Dr. H. C. Coe presented a specimen of round-celled sarcoma of the lining membrane of the uterus removed at autopsy. It was interesting not only on account of the comparative rarity of the disease, but also with regard to the history of the case. The patient, who was over 30 years of age, married, had entered the Woman's Hospital for relief from severe pain in the lower part of the abdomen and frequent uterine hemorrhages. The uterine canal was dilated and curetted, about an ounce of brain-like substance being removed, which was found to be round-celled sarcoma. The woman died of pyæmia on the eighth day after the operation. There were found metastatic abscesses in the lower lobe of the right lung, the largest the size of a hen's egg, and infarctions of the liver and spleen, together with a purulent thrombus of the right iliac vein extending into the vena cava. Dr. Coe was of opinion that sarcoma

of the lining membrane of the uterus was not of so infrequent occurrence as was generally supposed, and said that it was not improbable that a number of the cases of this disease were mistaken for fungous endometritis.

PORTIONS OF THE SCAPULA REMOVED BY OPERATION.

Dr. JOHN A. WYETH presented a portion of the acromion process and spine of the scapula which he had removed for ostitis following traumatism. The point of interest in the case was the fact that complete healing of the wound and recovery took place under one dressing. Antisepsis was observed during and after the operation.

NECROSIS OF THE HEAD OF THE TIBIA.

Dr. WYETH also presented some pieces of bone which he had removed seven weeks previously from a patient 36 years of age, who had received an injury of the tibia in the neighborhood of the knee-joint two years before the operation. There was an ostitis which Dr. Wyeth thought had followed periostitis. It became necessary, in order to remove all of the dead bone, to enter the knee-joint, which was done with great care, protecting the opening constantly during the operation with a piece of iodoform gauze. The patient recovered without any symptom of arthritis, or even of synovitis.

HIP-JOINT DISEASE.

Dr. WYETH also presented all that remained of the head of the femur of a boy who had been suffering for two years from hip-joint disease. He performed exsection with an exsector which he had already exhibited to the Society, and he again spoke in praise of the work done by the instrument. Before the operation the shortening of the limb amounted to two inches, but reformation of bone had taken place to such an extent that there now existed but one inch shortening. Dr. Wyeth stated that exsection for hip-joint disease was not dangerous, and it should be resorted to as soon as invasion of the bone-tissue was evident, and thus the patient would be saved many years' suffering, permanent lameness, and perhaps death. He had never had but one patient die after the operation, and in that instance death took place six months subsequent to the operation, and was due to other causes.

Dr. V. P. GIBNEY remarked, concerning the second specimen presented by Dr. Wyeth, that the case was one of what would be considered as tibial abscess, for which some at the present time performed the operation of trephining, but he thought the treatment adopted by Dr. Wyeth was very commendable, and it showed how timely interference would save the joint from becoming disastrously diseased. He had reported the case of a boy 5 or 6 years of age, who suffered from tibial ostitis, no surgical, and very little mechanical, interference having been made. Finally a cold abscess formed, which ran a long course; the knee-joint became implicated, and he had now white swelling. Further than that, he had recently developed ostitis of the head of the opposite femur. Dr. Gibney felt convinced that, had the operation performed by Dr. Wyeth been performed upon the tibia early in this case, the knee-joint would not have become diseased, and tubercular ostitis of the left hip would have been prevented. He asked Dr. Wyeth why, in the case of his third specimen, it would not have been as rational to resort to the operation of gouging out the bone-detritus as to perform excision.

Dr. WYETH replied that one objection would be that, the hip-joint being deeply seated, it would be difficult to remove all of the dead bone, particularly if it extended below the line of the trochanter. But he was not willing to say that the gouge should never be used on the hip-joint.

Dr. J. H. RIPLEY inquired if it were common to find multiple abscess of the joints in patients who had not a strong diathesis. He thought that prolonged disease in the joint in the case narrated by Dr. Gibney would of itself indicate a strong tubercular or specific diathesis, and, this being the case, there probably would have been subsequent disease of the hip-joint, whether or not an operation had been performed upon the tibia.

A CASE OF SPINA BIFIDA CURED; SUBSEQUENT DEVELOPMENT OF CHRONIC HYDROCEPHALUS AND DEATH BY ASTHENIA.

Dr. V. P. GIBNEY presented the brain and a portion of the spinal cord of a child which was first brought to his clinic on the 11th of July, when it was seven days old. At that time there was a tumor over the coccyx and sacrum, which was of small size, smooth, and perfectly translucent. There was at the end of the tumor a mark which indicated the presence of a partially-healed ulcer. On the 23d of July the tumor seemed to be somewhat larger, and, without examining it by the light-test, Dr. Gibney introduced an aspirator and found pus instead of serum. Dr. Ripley, who saw the patient, was of the opinion that the contents of the sac had become purulent from contiguity to the small ulcer. About the 25th of the month the reflexes of the patellar tendons were exaggerated, and it seemed that myelitis would develop. On the 29th he thrust a bistoury a distance of two or three lines into the tumor, when it seemed to enter a second tumor. After two weeks the tumor became harder, and it appeared that the outer enlargement had collapsed and produced a cure of the spina bifida. There was no further trouble with the tumor, and the patellar reflexes became normal. About a month later, prolapsus of

the rectum occurred, and on the 23d of August the head was noticed to be growing larger. Hydrocephalus rapidly increased, and on the 1st of September Dr. Gibney began a series of aspirations of the cranial cavity, withdrawing at each operation only a small amount of fluid, without producing any unpleasant effects whatever. The last aspiration was performed on the 4th of December, when the needle seemed to strike a somewhat resisting substance. The child died on the 6th of December.

At the autopsy the sac of the spina bifida was empty, but was capable of containing about ten minims of fluid. It was difficult to determine whether or not there had been an abscess over the spina bifida. There was no dilatation of the canal of the cord. Two pints and a half of serum were removed from the cerebral ventricles, which were dilated into one large cavity, obliterating nearly all trace of convolutions. The cerebellum and the medulla oblongata were not involved. The places of entrance of the aspirator-needle were indicated by a few points on the gray matter.

Dr. Ripley remarked that perhaps Dr. Gibney had used the needle too often. Bennet had tapped a hydrocephalic child three times, death taking place after the third operation, and he thought that the tapping had been too frequently repeated. He cited Conquest, who had aspirated in nineteen cases of hydrocephalus. Ten of the patients recovered, and in those cases the operation was repeated only every two weeks. This, however, was an unusual experience.

Dr. Gibney remarked that in his case he at first aspirated every two weeks, but, later, once each week.

Dr. Ripley spoke of two cases of undoubted hydrocephalus in young children, both patients recovering,—one with treatment by aspiration and the other without. In both cases the peculiar hydrocephalic signs disappeared and the cranial sutures united. Although it was commonly supposed that the fluid in hydrocephalus did not become absorbed, it must have disappeared by absorption in these cases.

THE PLACENTA OF ABORTION.

Dr. Hopper presented a placenta of apparently the fifth month of development, which contained a fœtus apparently of the third month. The patient had borne two children, and again ceased to menstruate for three months. The uterus developed for a time, then began to diminish in size. She complained of loss of appetite and general uneasiness, and, after a time, expulsive pains came on and caused the placenta, with a small fœtus, to be expelled.

The Lancaster Crematorium was formally opened November 25.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, December 4, 1884.

The President, R. A. Cleemann, M.D., in the chair.

OVARIAN TUMOR.

Dr. Drysdale presented a polycystic ovarian tumor, which he had removed that morning. He had first seen the patient with Dr. C. R. Prall, May 5, 1884. She was a married lady, 50 years of age, pale, thin, and delicate-looking. She had had eight children, the youngest of whom was then 16 years old. With some trifling exceptions, her menstruation had been perfectly natural until two months before. Since then she had had a constant and sometimes profuse discharge of blood from the vagina, which still continued. She first discovered the tumor in March, 1884.

On examination, Dr. Drysdale found a semi-solid, smooth-walled, globular tumor occupying the lower part of the abdomen and reaching nearly to the umbilicus. It was freely movable, did not fluctuate, but was elastic and a little tender to pressure. Vaginal examination revealed a lacerated cervix. The sound entered the uterus two and a half inches, taking a direction to the right of the tumor. On deep pressure, the end of the sound could be felt at the lower part of the right border of the mass. While the sound was in the uterus the tumor could be moved freely without affecting it. Dr. Drysdale diagnosticated a multilocular ovarian tumor.

By the 5th of June—one month later—it had reached nearly to the ensiform cartilage. From this time it increased rapidly in size, and when it was removed filled the abdomen, pressing the lower ribs outwards. It proved to be a multilocular tumor of the left ovary.

His object in bringing it before the Society was to obtain an opinion from the members as to the cause of a phenomenon which was observed in the early stage of the growth. At the time the patient first noticed the enlargement, she found that when she would lie on her right side the tumor would ascend to the left, and when on her left side would rise to the right, as if lighter than the surrounding parts. She informed Dr. Prall of this, and he naturally supposed she was mistaken, but a careful examination of the tumor while she changed her position verified her assertion. As the mass increased in size this peculiar change of position ceased, and when the abdomen was opened nothing could be found to account for the irregular behavior of the growth.

Dr. Parvin inquired about the length of the pedicle and the weight of the tumor.

Dr. J. C. Da Costa has a case under obser-

vation in which the condition of great mobility is present.

Dr. DRYSDALE replied that the pedicle was extremely short. The tumor weighed thirty-five pounds, and was multilocular in character. At the time of its removal he could not determine any fluctuation. Every parovarian cyst is movable in its early stages. He intended to call attention to the peculiar and, to him, unaccountable motion of this particular cyst.

HYDROCHLORATE OF COCAINE.

Dr. CHARLES MEIGS WILSON presented the histories of three cases in which the hydrochlorate of cocaine had been used in operations with the hope of obtaining local analgesia, and reported negative results.

MALIGNANT CYSTIC DISEASE OF OVARIES.

Dr. D. LONGAKER exhibited the specimen, with the following history. The subject from whom this specimen was removed was a German woman, 63 years old. She had been married the last twenty-seven years of her life, and was sterile. During the last five months she was under the care of Dr. Jos. S. Gibb, of this city, at whose request I first saw her, and by whose kindness I am enabled to report the case. The menopause was established at 53,—ten years ago. The patient had always enjoyed fair health, but four years ago she again began to have a bloody discharge from the vagina. For this she consulted a doctor, and was soon well again. The date of the onset of her last illness was indefinite. It was insidious, and the particular symptom for which she desired relief was inability to micturate. This was found to be due to suppression of the secretion of urine, as the bladder was empty. There was also decided interference with nutrition; her appetite and strength failed rapidly. The urine was found to contain a very small amount of albumen. She had occasional nausea and bilious vomiting and diarrhœa. She suffered with pain in the left side of the abdomen. On examination the doctor discovered a hard tumor (nodulated) to the left of the uterus, projecting upwards into the left inguinal region. It was adherent, and but slightly movable.

She was first seen by me on October 6. At this time she was in bed, suffered from orthopnœa, and was unable to rest or lie down. Her abdominal cavity was greatly distended by a fluid which had accumulated rapidly in the previous three or four weeks. Œdema of the ankles had been noticed a few days before. Her general appearance was decidedly anæmic and cachectic. The abdomen was very tender to palpation, especially over the left inguinal and hypogastric regions. The flanks were bulging, and were flat on percussion. The tumor could be indistinctly outlined, immobile, lying in contact with the left ilium, dipping down into the true pelvis behind and to the left of the uterus, and distinct from it. The cervix had undergone senile absorption, but from the os externum a small polypus was found hanging in the vagina.

October 7 she was tapped. A large bucketful of a brownish-red fluid, of specific gravity 1020, was removed. On microscopic examination it was found to contain blood and various corpuscles and epithelium (the ovarian cell was not found). It contained paralbumin.

A more careful examination now revealed a circumscribed, clearly-defined, firm, nodulated growth in the region already indicated. It was found adherent, and could be only slightly displaced. It was of the size of a large fist. Palliative treatment was continued, but the patient's condition gradually grew worse. There was again a slight accumulation of fluid in the abdominal cavity. She was subject to attacks of bilious vomiting and diarrhœa, alternated with constipation. There was no apparent increase in the size of the tumor, and during this period pain was not a marked symptom. At no time was there acute suffering. She died of exhaustion, November 27.

Autopsy was made the next day by Dr. Gibb, in the presence of and assisted by Dr. E. W. Holmes and myself. The subcutaneous fat had been almost entirely absorbed. The parietal peritoneum was covered with lymph, with numerous nodular elevations in various stages of organization. The intestines had contracted numerous adhesions. The capsule of the liver was one-eighth of an inch thick. In the mesentery there were also deposits of lymph, some of which were more recent and less organized. The abdominal cavity contained about two quarts of fluid, the same as that already described.

On the left side, extending two inches above the pelvic brim, was found a tumor apparently solid, but which, on close examination, was found to be cystic. One of the largest of the cysts had ruptured; the opening was found at the posterior-inferior portion of the growth. It was not recent. The capacity of the emptied cyst was about four ounces. The tumor dipped down into the true pelvis between the broad and utero-sacral ligaments of the left side. It was very adherent, and was removed with great difficulty. On incising and freely opening the cyst, some coagulated fibrin was found,—the remains of a hemorrhage into the cavity. When it was entirely removed it was found to arise from the left ovary. The oviduct was slightly dilated, and its fimbriated extremity was adherent to and spread out over the tumor.

On the right side, in the broad ligament there is a cyst slightly larger than the tumor.

Its contents are dark and very dense; it is very heavy. The cyst is surrounded by a dilated Fallopian tube containing a clear, transparent fluid of a bluish-white hue. At its widest part it is an inch in diameter. Behind and below this cyst is found the right ovary; it is adherent, flattened out, and seems continuous with it. The entire specimen was carefully dissected out as it is shown. From its rapidly-fatal tendency, with the macroscopic appearance of the tumor, there is very little doubt that a microscopic examination will reveal it to be malignant. Though perhaps possessing the greater pathological interest, there are also a few points in the case which may concern us in regard to diagnosis and treatment. Study of the fluid at first caused a suspicion that it came from a cyst; its high specific gravity and the chemical tests to which it answered favored such a view. But this was entirely at variance with the history of rapid accumulation and absence of physical signs indicating the existence of a large cyst. It was apparent at the autopsy that an attempt at extirpation could only have hastened the fatal result.

The specimen was referred to a committee for further investigation.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Meeting of November 24, 1884.

Discussion on the Third Stage of Labor.

Dr. W. M. POLK, being requested to open the discussion, said that he heartily agreed with the author of the paper* in saying that we were not in a position to discard Crédé's method. It seemed to him that the method had been so rich in good fruits since its introduction into America, as shown by statistics, that its advantages were placed beyond controversy. He certainly had never seriously contemplated abandoning it in any respect, and he could not understand how any practitioner of experience could once claim that Crédé's method should be relegated as a piece of useless rubbish. There were one or two points, however, in the paper to which he must take amiable exception. For instance, ceasing the administration of chloroform at the close of the second stage, or as the child's head began to distend the perineum, seemed very improper, as this was just the time when the patient most felt the need of the anæsthetic, and he thought the damage which pressing the chloroform at this moment might do would be fully compensated for by the relief which it would give the patient. Of course every one knew the danger of producing inertia of the uterus, and this danger had appeared to him to be so great that he had at moments almost contemplated never using the agent again, but when he did employ it he continued its administration until the head was virtually expelled.

He further disagreed with the author with regard to non-twisting of the membranes. He had seen no harm come from the practice, and he thought it might do good. If within five minutes after delivery of the child the uterus did not show a tendency to contract and expel the placenta, he thought it our duty to begin to practise Crédé's method; and if after the lapse of from half an hour to three-quarters of an hour by this method the membranes were not expelled, he should regard the case as a pathological one.

Dr. Baruch inquired of Dr. Polk what had been his experience with reference to expulsion of the placenta into the vagina shortly after the second stage of labor among the women of higher social life.

Dr. Polk replied that he had found experience to vary in this matter, depending upon the health and strength of the woman. In weaker women the placenta was liable to be retained within the os, while in the stronger, whatever might be their social standing, it would probably be expelled.

Dr. Robert A. Murray believed with Dr. Baruch that no method would take the place of Crédé's in cases demanding its use, but he believed also that nearly all the physicians in New York City practised a method which was superior to Crédé's in the large majority of cases of midwifery. It was taught, he believed, by all, or nearly all, professors of midwifery in the city that after the second stage of labor had been completed the physician should retain the hand upon the uterus, aiding in its contraction, until the organ has assumed permanent contraction. If this were done, the true expression method of Crédé would be applicable only in cases in which hemorrhage was threatened after the use of chloroform, or after extreme exhaustion of the patient from prolonged first stage, powerless second stage, or instrumental delivery. He practised twisting of the membranes.

Dr. J. H. Fruitnight agreed with the author as to the advantage of placing the hand against the external vaginal orifice to guard against too rapid expulsion of the membranes. He considered twisting of the membranes a proper procedure. Out of six hundred and fifty cases of midwifery, he had had retention of the membranes in one case and post-partum hemorrhage in three or four. He regarded the placenta after delivery as a foreign body, which should be expelled from the cavity of the uterus as soon as practicable.

Dr. Irwin thought the paper gave one the impression that the Dublin school and the English physicians interfered in the third stage of labor more than they do in fact. He spoke from his experience in the hospi-

* Paper by Dr. Baruch: see page 216, *ante*.

tals and attendance on societies at which this subject had been discussed. He thought he was not mistaken in his recollection that their practice was usually to adopt the expectant plan. At the same time, however, they would not exclude active assistance, especially in cases which seemed really to call for it. They did not object to the removal of the placenta when it lay loose in the vagina, and they favored twisting of the membranes, but not pulling upon them.

Dr. MALCOLM MCLEAN directed attention to the importance of having a clean vessel at hand into which to cast the placenta, in order that it might be examined carefully with regard to whether a portion of it may have remained in the uterine cavity.

Dr. BARUCH, in closing the discussion, said, with regard to Dr. Polk's statement concerning the use of chloroform, that he recognized the desirability of lessening the patient's sufferings, which were very intense at the close of the second stage, and for that reason he continued its administration, in cases which demanded the employment of the anæsthetic, up to a moment before the delivery of the child. His only objection to twisting the membranes was that there was a temptation and a liability to make some traction during the procedure, and this would favor tearing.

REVIEWS AND BOOK NOTICES.

A TEXT-BOOK OF PRACTICAL MEDICINE. Designed for the Use of Students and Practitioners of Medicine. By ALFRED L. LOOMIS, M.D., LL.D. With Two Hundred and Eleven Illustrations. New York, William Wood & Co., 1884. 8vo, pp. 1102.

This work traverses the usual field of internal pathology considered in text-books upon the practice of medicine, but it does so with evidences of such unusual discretion and skill as to present the subject in a fresh light and to constitute a most acceptable addition to medical literature. The illustrations are abundant, original, and, as a rule, neatly drawn, and well illustrate the text, in which the subjects are discussed in the light of the most recent additions to our knowledge of pathology and therapeutics. The work is characterized throughout by temperate statements with regard to vexed questions in pathology, shown particularly in the consideration of the several zymotic diseases, and in the suggestions for treatment it is a safe guide. The pages do not bristle with ready-made formulæ and specifics for various symptoms, and on this account will probably be more acceptable to those who know the fallacies and dangers of dogmatism in therapeutics. For students this will probably be regarded as the best American text-book of practical medicine that has recently appeared.

A TEXT-BOOK OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By JOHN J. REESE, M.D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, etc. 8vo, pp, 606. P. Blakiston, Son & Co., Philadelphia.

Medical jurisprudence is as yet an undeveloped, or perhaps it would be more accurate to say an undifferentiated, specialty in this country. While a fair number of medical men have sufficient knowledge on individual topics, such as insanity and poisonings, there has as yet been no attempt to cultivate the science in connection with our medical colleges to such a degree as to produce medical jurists commensurate in knowledge with the ophthalmologist, gynæcologist, and other specialists in practice. That this is a serious error in medical education is admitted. It arises partly, perhaps, from the lack of material for the practical instruction on the topics involved, partly also from the rather ponderous character of the literature of the science.

The work before us is a step towards attracting students to the study of medical jurisprudence and toxicology. The author has been long known in the field to which it is devoted, and he brings to bear in its production large experience as an expert and as a teacher both to medical and legal students. A careful examination of the book bears out these expectations, and we are pleased to learn, from a perusal of the journals, that it has been everywhere favorably received.

The work covers the entire subject, a large amount of the space being given to toxicology. The style is clear and condensed, and the arrangement of the matter satisfactory. The absence of illustrations can hardly be considered a defect, because the facilities of chemical and microscopical investigation are at the present time so great that any interested student can prepare specimens for himself, and such preparations will be of much greater practical value than any schematic illustrations.

It is to be hoped that the work will find favor in the eyes of those whose duty it is to guide the studies of medical students in the departments of toxicology and jurisprudence.

GLEANINGS FROM EXCHANGES.

REMOVAL OF RIGHT KIDNEY.—At Milan, on June 8, Prof. Bottini extirpated a kidney under the following circumstances. A. M., 27 years of age, had had two calculi removed by lithotomy fifteen years before. Three years after the operation an abscess formed and discharged in the iliac fossa, and then reappeared in the lumbar region, where it was opened by the use of caustic potassa, which was followed by a permanent fistula.

Having decided to remove the kidney, Prof. Bottini, operating under strict antiseptic precautions, made a vertical incision along three inches outside the quadratus lumborum muscle. The kidney was isolated, the renal artery was secured by one ligature, the vein and ureter by another. A drainage-tube was introduced after the space had been cleared and bleeding stopped. The sinus was incised, and its walls united by sutures. The dressings were renewed daily, the drainage-tube was gradually shortened and entirely removed on the eighteenth day. Temperature was 100° on the second day, and soon became normal again. Urine was secreted in proper quantity, without pain, and gave no deposit. The patient went home on the eighteenth day, with the wound nearly healed. Upon examination, the kidney was found to weigh forty-eight grammes. It was the site of chronic pyelonephritis, and two small calculi were found in its dilated pelvis.

Poisoning by One-Fourth Grain of Morphine.—At a meeting of the Cincinnati Academy of Medicine, Dr. Thad. Reamy reported a case of fatal poisoning from one-quarter of a grain of morphia sulphas. The patient was a well-nourished lady of twenty-eight years of age. Dr. Reamy had operated under ether, at the Good Samaritan Hospital, for laceration of the cervix uteri and perineum. The operation lasted thirty minutes, and the patient came nicely out from under the anæsthetic in another half-hour. About an hour after the operation, the patient in the mean time having been conversing with friends, pain was complained of, to relieve which Dr. Hirons, the house-physician, administered one-fourth grain of morphine hypodermically. In about one-quarter of an hour the pain subsided. Dr. Hirons visited the patient again in about an hour, when he found her semi-comatose, with contracted pupils, slow respirations, and feeble pulse. The usual restoratives were administered by Dr. Hirons, Dr. Reamy (who was hastily summoned), and Dr. Mitchell (who happened in). The patient sank gradually, and died in about eight hours.

In commenting on this case, Prof. Nickles criticised the treatment in that not enough atropine was given. One-ninety-sixth of a grain had been given with the morphine. This amount of atropia was twice repeated, and afterwards one-twentieth grain was given. Prof. Nickles said that it should have been given in one-sixteenth-grain doses every ten or fifteen minutes until the breathing was increased in frequency.

The patient had never taken morphine before, and her peculiar idiosyncrasy was never before discovered.

The Pathology of Myxœdema.—Dr. W. B. Hadden (London), in a paper on this subject (*Proceedings of the International Medical Congress*), said that myxœdema is a disease characterized by a general swollen condition of the body. The appearance of the patients suggested ordinary dropsy, but the parts did not pit on pressure. The face was swollen and puffy, the lips and alæ nasi thickened, the eyelids œdematous-looking, and on each cheek there was a well-defined flush. The general expression was placid and inert,—in a word, cretinoid. The skin everywhere was dry and harsh; perspiration and the secretion of the sebaceous glands were almost absent. The hands were broad, clumsy, and spade-like. The hair was soft and scanty, and tended to fall out. The nails and teeth shared in the general mal-nutrition. The thyroid gland wasted, although it was difficult often to determine this, in consequence of the swelling of the tissues of the neck. Soft masses were usually to be felt in the supra-clavicular regions. The temperature was almost constantly subnormal. The speech was slow, thick, monotonous, nasal. The tongue seemed to be too large for the mouth. There was general muscular feebleness. The gait was slow and tottering, and all movements were retarded. There was marked mental lethargy. An indisposition to all bodily and mental activity was one of the most striking features of the disease. The urea excreted by the urine was much diminished, but, with this exception, there was no constant change. In the latest stages albuminuria and true dropsy might supervene. Somnolence, insanity, impairment of memory, disorders of the special senses, and certain subjective sensations, were frequently experienced. The tongue, uvula, soft palate, and larynx were generally swollen, and difficulty in deglutition was often observable. The appetite was bad, and defecation usually difficult, in consequence, probably, of swelling of the mucous membrane of the rectum. The disease usually attacked adult women, but it occasionally commenced before the age of twenty, possibly sometimes in childhood. It occurred among rich and poor. Climate and race were probably without influence. Syphilis and excess of alcohol had no share in its causation, but permanent mental disturbance and exhaustion from excessive child-bearing were occasional antecedents. As regarded family history, phthisis was remarkably frequent, acute rheumatism and insanity occasional, and in at least one case myxœdema had been observed in the collateral relatives. As to morbid anatomy, the constant factor is a diminution in size of the thyroid gland. According to Dr. Ord, there is solid œdema of the connective tissue throughout the body, and a great increase in the amount of mucin; hence the name myxœdema. The author believed that the disease was probably dependent on change in the sympathetic nervous system, and he thought it not unlikely that the thyroid was in some

relation with the peripheral sympathetic nerve-fibres. This view has recently been borne out by post-mortem evidence. He had seen improvement occasionally from the medical treatment, but especially from jaborandi.

UNUSUAL CAUSE OF INTESTINAL OBSTRUCTION.—A patient who was lately under my care, suffering from chronic obstruction in the intestinal canal, probably in the descending colon, took, on his own account, freely of charcoal powder—often a drachm a day—to relieve flatulency. The result was an all but fatal obstruction. Fortunately, under the use of enemata, coupled with persistent but gentle abdominal friction, relief was obtained, although stercoraceous vomiting once occurred. The excretions causing the obstruction were coated with carbon, and portions of carbon also passed in the free state. This is the second case in my practice in which charcoal powder has caused intestinal obstruction.—DR. RICHARDSON: *Asclepiad*, October, 1884.

MISCELLANY.

NATIONAL HEALTH LEGISLATION BEFORE CONGRESS.—We are indebted to Dr. Gihon, President of the American Academy of Medicine, for a copy of the bill entitled "An Act to Prevent the Introduction of Contagious and Infectious Diseases into the United States, and to Establish a National Board of Health," which was prepared by a Committee of Conference of the State Boards of Health held recently in Washington. The bill has been presented by the Committee on Federal Legislation to the Committee on Public Health of the National House of Representatives, and has a good support from individual members. In view of the prospect of a cholera epidemic, the need of such a board is evident, and, if created, it will be able to demonstrate its usefulness, unless fatally hampered by influences emanating from the Marine Hospital Service.

AN AMERICAN SOCIETY OF PUBLIC ANALYSTS was organized in Brooklyn on the 24th of last month, by representatives holding appointments under the Boards of Health in the several States of the Union. Its objects will be, by frequent meetings, the discussion and publication of papers, etc., to advance and disseminate knowledge regarding adulteration of food or drugs, to secure uniformity of results, and to provide for efficient sanitary control over the food-supply. A meeting was held December 8 for the election of officers.

WOMEN MEMBERS OF MEDICAL SOCIETIES.—Dr. Osborn was recently elected to membership in the Academy of Medicine of Cincinnati, she making the fourth female member. These four lady-physicians are fairly active members of the Academy.

NOTES AND QUERIES.

OBITUARY.

DR. HARVEY L. BYRD, of Baltimore, died in that city, November 29, in the sixty-fifth year of his age. He was a graduate of the University of Pennsylvania, and also attended lectures at the Jefferson Medical College, and revived the Medical Department of the Washington University and was the dean of its faculty for five or six years. He at this time joined several others in forming the College of Physicians and Surgeons of Baltimore, in which he was the president of the faculty and at different times held several professorships. He was editor of the *Oglethorpe Medical and Surgical Journal* for three years, and contributed a number of articles to the medical press. He was a member of several medical societies. At the close of the war, during which he served as surgeon in the Confederate army, he went to Baltimore.

HENRY A. MARTIN, M.D., M.M.S.S., of Boston, died December 7, 1884, at his home in that city.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 7, 1884, TO DECEMBER 20, 1884.

HAMMOND, JOHN F., COLONEL AND SURGEON.—Retired from active service, by operation of law, on December 7, 1884, under provisions of Act of Congress approved June 30, 1882. S. O. 287, A. G. O., December 8, 1884.

MCKEE, JAMES C., MAJOR AND SURGEON.—Leave of absence still further extended one month. S. O. 288, A. G. O., December 9, 1884.

LAUDERDALE, JOHN V., CAPTAIN AND ASSISTANT-SURGEON.—(Fort Sully, Dakota Territory.) Granted leave of absence for one month, to take effect about December 20, 1884. S. O. 146, Department of Dakota, December 9, 1884.

COMEGYS, E. T., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 234, Department of Missouri, December 8, 1884.

PORTER, JOSEPH Y., CAPTAIN AND ASSISTANT-SURGEON.—Sick-leave of absence extended four months, on surgeon's certificate of disability. S. O. 286, A. G. O., December 6, 1884.

KANE, JOHN J., CAPTAIN AND ASSISTANT-SURGEON.—From Department of the East to Willet's Point, New York. S. O. 286, A. G. O., December 6, 1884.

BANISTER, J. M., CAPTAIN AND ASSISTANT-SURGEON.—(Fort Adams, Rhode Island.) Granted one month's leave of absence, on surgeon's certificate of disability. S. O. 251, Department of the East, December 9, 1884.

PILCHER, JAMES E., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered to Fort Custer, Montana Territory, for duty. Order assigning him to duty at Fort A. Lincoln, Dakota Territory, amended. S. O. 145, Department of Dakota, December 8, 1884.

GRAY, CHAS. C., MAJOR (retired).—Died at Geneva, New York, November 22, 1884, instead of November 26, as heretofore announced. Circular Orders, A. G. O., December 8, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM DECEMBER 7, 1884, TO DECEMBER 20, 1884.

P. A. Surgeon T. C. CRAIG, detached from "Alliance," and placed on waiting orders, December 6, 1884.

Assistant-Surgeon L. W. CURTIS, to the Naval Hospital, Chelsea, December 9, 1884.

P. A. Surgeon J. H. GAINES, present duty continued.

P. A. Surgeon E. H. GREEN, special duty at Museum of Hygiene, Washington, December 11, 1884.

P. A. Surgeon J. M. MURRAY, detached from Naval Hospital, Chelsea, to the Flag-ship "Hartford," December 9, 1884.

Surgeon T. WOOLVERTON, to the "Shenandoah," December 6, 1884.

Medical Inspector D. KINDLEBERGER, detached from the "Hartford," and placed on sick-leave.

PHILADELPHIA, JANUARY 10, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON PERICARDITIS, PROBABLY THE RESULT OF TRAUMATISM; AND ON THE TREATMENT OF PLEURISY.

Delivered at the Philadelphia Hospital

BY EDWARD T. BRUEN, M.D.,

Physician to the Hospital, and Demonstrator of Clinical Medicine in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—I propose to-day to call your attention to this man, who was admitted to the hospital six days ago. The patient stated that he had been injured in a railroad-accident about seven weeks ago. He was jarred between the seats in some way, but did not notice any special inconvenience, beyond the general shaking up, until two or three weeks later, when pain in the præcordia, cough, and dyspnœa appeared, and these have continued up to the present time.

Upon admission, he complained of marked shortness of breath, a dry cough, with a severe pain in the chest, which was rather more marked over the præcordia than elsewhere, and radiated around to the left side. His temperature, which was 99° on admission, went up to 102° the same evening. Since then the temperature has ranged between 99° and 101°. On admission, the pulse was about 100 per minute, and slightly dicrotic.

Our interest, of course, centres in the diagnosis, and naturally the seat of the pain and the dyspnœa attract our attention to the chest. Percussion of the chest shows marked flatness over the region of the heart. Above the second rib there is dulness. The first clinical point to which I call attention is the recognition of the difference between dulness and flatness. By contrasting the flatness obtained over a perfectly non-resonant mass with the dulness obtained over a partially resonant area, we may be tempted to call the dulness good resonance; but by contrasting the dulness with the percussion-note heard over a normal portion of the chest, its true quality is recognized. In the left axillary region there is resonance, and also posteriorly from the top to the bottom of the chest. The right side is everywhere resonant.

Listening over the right side of the chest, I recognize an exaggerated respiratory murmur. Over the left side posteriorly a respiratory murmur is heard, which is vesicular, although feeble. If the patient take a forcible inspiration, you might call it feeble bronchial breathing, but it still has the vesicular element. It is not quite harsh enough to be properly called bronchial breathing, nor is the expiratory sound high-pitched. Auscultation during quiet breathing gives a very faint respiratory murmur, so faint, indeed, that you might infer that there was absence of respiratory murmur. Auscultation of the præcordia reveals very feeble, indistinct heart-sounds. The word "distant" is the proper one to convey the muffled character of the sounds, which are without murmur. The same muffled character of the sounds can be reproduced by placing a layer of cotton over the healthy heart. Examination of the præcordial and epigastric regions by inspection shows the existence of a pulsation; but, adding palpation to inspection, we find that the apparent pulsation in the epigastrium is merely a transmitted vibration. Examination of the præcordia by inspection shows that there is prominence of this region. Inspection of the chest shows that while the right side moves distinctly in respiration, the left is perfectly quiet.

What shall be our diagnosis from the signs which have been elicited? Evidently some one had made the diagnosis of pneumonia or pleurisy before he was admitted to the hospital, for his back bore the marks of cups. The question of pneumonia can, I think, be readily dismissed. In the first place, there is no bronchial breathing at any part of the chest. In the second place, the only area of dulness is in front over the præcordial region. If this dulness had been on the right side, we might have attributed it to consolidation of the middle lobe of the right lung; but, as the left lung has no middle lobe, this idea can be dismissed. The flatness is over the præcordia, and not over the lung proper. Again, it is impossible to suppose that the man has had pneumonia for four weeks and not present any more positive signs to-day.

The question in regard to pleurisy is

not so readily disposed of. In favor of pleurisy we have the feeble respiratory murmur and the diminished movement of the left side, while, on the other hand, there is exaggerated respiratory movement, exaggerated respiratory murmur, and increased resonance of the right side. All these signs, of course, indicate that the left lung is disabled. Having excluded consolidation of the lung, it would seem probable that pleurisy exists. At the same time there is one strong point against the idea of pleural effusion, and that is the resonance on percussion over the left chest. This excludes pleurisy as a general condition, but it does not exclude a localized pleural effusion. Flatness on percussion is almost always due to the presence of fluid. I think that it may be said that the sound given by pulmonary consolidation is always dull, while the sound given by a collection of fluid is always flat. We, however, dismiss the idea of a sacculated pleural effusion, partly by exclusion, and partly by means of another line of reasoning, to which I shall refer in a few minutes. A localized pleural effusion in the region of the præcordia would be very unusual. Occasionally a localized effusion occurs at the apex, but even this is rare. I recall one case, exhibited last year at the University Hospital clinic, in which a localized empyema occupied the space between the third rib and the clavicle on the right side. Such effusions usually occur posteriorly, and not anteriorly. Therefore, if we have any more satisfactory explanation of these physical signs, we have good grounds for excluding sacculated pleurisy.

The area of flatness and the muffled heart-sounds point to some lesion of the pericardium. We may have fibrinous inflammation of the pericardium, in which both the heart and the pericardium are covered with fibrinous exudation. We may also have a serous inflammation of the pericardium, in which serous fluid is thrown out. These conditions are analogous to fibrinous and serous inflammation of the pleura. When the pericardial process is developed slowly, it is more common to have the fibrinous form of the exudation in excess. The history of the case and the physical signs would point to such a condition. Pericarditis, however, never develops spontaneously, like pleurisy. In a large proportion of cases, probably two out of every three, it develops in consequence of rheumatism. I have carefully investigated the history of this patient, but can find no evidence of rheumatism. This is a great point against the diagnosis of pericarditis. After rheumatism, the largest number of cases are associated with chronic Bright's disease. There is no Bright's disease in this case, so far as can be made out from the examination of the urine and of the general condition. The next most frequent cause of pericarditis is some disease of the lungs or pleura, more particularly the latter. We have already said that there is no reasonable ground to believe in the existence of pleurisy. Some cases of pericarditis are produced by tubercle, and a few cases by cancer, but these conditions are readily excluded in this case. Then we have sometimes abscess of the liver perforating the chest and producing pericarditis. These are all indirect causes. We have said that the patient has no rheumatism, no Bright's disease, no affection of the pleura or lungs; he has no tubercular disease nor malignant disease; there is no abscess of the liver, and no peritonitis. Having excluded these causes of pericarditis, how is the condition, if it does exist, to be explained?

I attribute it to the injury, for direct local injury will account for a small fraction of the cases of pericarditis not accounted for by the causes already enumerated. If this were a case of ordinary pericarditis, could it develop in this slow, latent way?

One reason for bringing this case before you is because this disease will be frequently overlooked unless the physical signs are carefully considered. This is an affection which is chiefly recognized by the physical signs. The symptoms are, as a rule, indefinite and not sufficient to allow any one to make a diagnosis without a careful physical examination. This man is suffering from dyspnœa, but this is not so severe as to make one suspect that the cardiac sac was the seat of inflammation. Occasionally there is violent dyspnœa and the delirium of which you read in the text-books, but usually the cases of pericarditis seen in actual practice closely resemble the one before you.

In this case, if we conclude that our patient is suffering from pericarditis, we must explain the occurrence of the pul-

monary symptoms. This can be easily understood if the anatomy of this region is recalled. The pericardium rests on the large bronchial tubes, and if effusion occur into the pericardial sac pressure is exerted on the bronchial tubes of the left side and air is prevented from entering the left lung. I am disposed to account for the feeble breathing and the absent respiratory movements by the pressure of the pericardial sac—enlarged as it is by the inflammatory process—upon the bronchial tubes, and I am inclined to regard the dulness which is present at the apex of the left chest anteriorly as due to the partially-inflated lung, just as we explain the dulness in the hypostatic congestion of typhoid fever. All the respiratory symptoms may be ascribed to the pressure of the pericardial sac upon the bronchial tubes. The heart itself is probably drawn back into the pericardial sac, and this apparent pulsation in the epigastrium is nothing but a tremor transmitted from the heart. I think that the position of the heart, when there is pericardial effusion, is often misapprehended. In one case, and the only case in which I have tapped the pericardial sac, a distinct pulsation was felt in the position of the apex, and I introduced the trocar with fear and trembling lest I should strike the heart. Examining as well as I could with the canula in the pericardial sac, I found that the heart was crowded over somewhat to the right and into the upper part of the sac. The pulsation which I had felt had been transmitted through a layer of fluid. In this case you recollect that we made the diagnosis of fibrinous, not serous, pericarditis, and the effusion, though extensive, is not as large as frequently observed.

What shall be done for the patient under these circumstances? The treatment of pericarditis depends altogether upon its cause. If in a case of articular rheumatism the symptoms of pericarditis make their appearance, you will simply continue the treatment of the rheumatism. If that is the alkaline treatment, you simply push the alkaline remedies. As you are aware, there are two plans of treating rheumatism,—the method with large doses of alkalies and the method with the salicylates of sodium or ammonium. I might expand this idea of the treatment of rheumatic pericarditis so far as to say that the salicylates are useful in rheumatism to control two symptoms,—the pain and high temperature. Often after the administration of this remedy the temperature rapidly falls and the pain disappears, and rapid convalescence may follow. At other times, although the pain and fever are lessened, the inflammation of the joints persists. This is because there still remains in the blood a certain amount of nitrogenous material, which is one of the causes of rheumatism, and which should be eliminated. As these products of retrograde tissue-waste are only eliminated in combination with alkalies, as urates of sodium and potassium, these alkalies should be administered. My own plan is to always use the alkalies in addition to the salicylate of sodium until the urine becomes alkaline. When this occurs I diminish the amount of alkali, but still continue it in sufficient quantity to keep the urine alkaline.

When pericarditis occurs in the course of Bright's disease, treatment will not be of much service, but the usual regimen for Bright's disease will be proper.

As I believe that this is merely a simple inflammation of the serous sac, I shall treat it as we ordinarily do inflammation of a serous membrane. I shall apply blisters, and use acetate and iodide of potassium internally. This is not the alkaline treatment, for I do not push these remedies in large doses. We now are administering ten grains of acetate of potassium with five grains of the iodide four times a day. Small blisters are applied over the præcordia. The action of the heart has been supported by small doses of digitalis. On admission, the pulse was dicrotic, and the action of the heart embarrassed and diminished by the exudation around the organ. The indication was therefore to support the action of the heart while trying to remove the inflammatory exudate. We have given ten drops of the tincture of digitalis three times a day, and for the first day or two alcoholic stimulus was also used, but this has been discontinued.

I wish to make a few remarks on one symptom, to which I have intentionally refrained from referring until the present time. This symptom is friction-râle, which is very characteristic of pericarditis. So far as this case is concerned, this sign has been of no value in the diagnosis, because the case came under observation

after the friction-sounds had disappeared. When, however, friction-sounds are present, how will you differentiate them from a murmur produced within the heart? By the following points. A pericardial friction-sound is superficial; it is a grazing, to-and-fro sound. Sometimes pericardial râle cannot be distinguished from an endocardial murmur by these signs. The great point is that an endocardial murmur will be transmitted in the direction of the blood-current by which it is produced. In other words, if an endocardial murmur is produced in the aortic region, it will be transmitted into the carotid arteries or along the course of the aorta. If you have a mitral regurgitant murmur, it will be transmitted in the direction of the blood-current,—viz., back into the lung through the left auriculo-ventricular opening,—and may therefore be heard in the axilla. A pericardial friction-sound is, on the other hand, heard only at the position where it is produced, or in that immediate vicinity, and a pericardial friction-sound will change its position. If some of the exuded lymph is polished down by the action of the heart, the friction-sound will disappear from that position and will be heard at another point, at which new roughnesses form. An endocardial murmur does not change its position, and is constantly heard at the valvular points. The friction-sound is synchronous with the movement rather than the sounds of the heart. Commonly, it is heard over the base of the heart or near the orifices of the vessels. Change of posture may induce an increase of murmur, rendering a murmur which is faint in the vertical quite distinct in the recumbent. Finally, the alterations common to the walls of the heart in endocardial disease are absent.

THE TREATMENT OF PLEURISY.

I bring before you another case, which you have seen on a previous occasion. The patient came into the hospital about six weeks ago. He then had a large pleural effusion filling the left chest from the clavicle to the base. This effusion had taken place slowly, requiring at least ten days to reach its height, so that the patient did not suffer markedly from dyspnœa.

I have brought the case before you in order to show you two things: first, the progress of the case under treatment; secondly, to demonstrate the physical signs of pleural effusion in the stage of absorption. The patient was treated by jaborandi sweatings. The treatment has been a teaspoonful of the fluid extract of jaborandi every other day for two weeks, and then about three times a week to the present time; so that he has been under this treatment for four or five weeks. Together with this he has received ten grains of iodide of potassium three times a day. Within the last two weeks we have practised inunctions of mercurial ointment, applying it first to one axilla, then to the opposite axilla, and then to the groins. I have found that when a pleural effusion reaches a certain point absorption is very slow, and I believe that the careful use of mercurial ointment will quicken absorption in this stage.

I shall now percuss the chest, in order that you may see the improvement. While sitting up there is perfect resonance anteriorly. Over the back the percussion-note is almost flat. As you can see, small blisters, about the size of a dollar, have been applied. Often there will be, during the absorption of pleural effusion, a tympanitic resonance over the anterior portion of the chest. When these physical signs are limited to a small area near the apex of a lung, they may suggest the presence of a cavity. The mistake may be avoided by noting the absence of the usual auscultatory signs of such a condition.

The only further point which time permits me to observe is that the decubitus of the patient has a great deal to do with the shape of the effusion in the chest. This patient's chest still has considerable fluid in it. There is complete absence of respiratory murmur on the left side posteriorly. The reason that the remainder of the exudate occupies this position is because the recumbent posture has been maintained through the attack. I have instructed him to sit up more or less, and if he do this the absorption of the fluid will, I think, be materially quickened.

OXALURIA.—Dr. Charles N. Durselen, of Chicago, recommends the employment of biphosphate of sodium and nitro-muriatic acid in the treatment of oxaluria, the latter agent being especially applicable to cases connected with dyspepsia or disordered state of the liver, and in hypochondriacal cases. In simple cases, especially if accompanied by anæmia or with costiveness, better results will be obtained from the former remedy.

ORIGINAL COMMUNICATIONS.

ON RAPID DILATATION OF THE UTERINE CANAL.

BY WILLIAM GOODELL, M.D.

(Remarks made at the Obstetrical Society of Philadelphia, October 2, 1884.)

FOR many years I enlarged or straightened the uterine canal, according to the requirements of the case, either by tents or by Sims's operation, and preferably by the former. Having had several serious warnings, in the shape of inflammation following these operations, I began to perform them with fear and trembling. Yet nothing very untoward happened until the year 1878, when two grievous mishaps befell me.

A charming young lady, the centre of a large circle of admiring friends, came from a neighboring State to consult me about a dysmenorrhœa which grew worse and worse every year. The cervix was so bent forward, and the stenosis of its canal, *per se* as well as by angulation, was so marked, that I unhesitatingly performed Sims's operation. Within a few days septicæmia set in, soon the parotid glands swelled up, and on the ninth day she died. True it is that at the same time two piles also were tied; but this latter operation I had performed so many times with impunity that I was, and am still, disposed to attribute the blood-poisoning to traumatism of the cervix, and not to that of the rectum.

Hardly had I time to recover from this bitter blow, when a case of exhausting menorrhagia fell into my hands. The lady was the young bride of a husband well advanced in life, who doted on her as only old men dote on much younger wives. I dilated the cervical canal with tents and curetted many vegetations from the endometrium. A furious peritonitis set in, and in less than three days this young wife lay dead, and the husband was frantic with grief.

The anguish which I felt at the death of these two ladies, and the heart-rending scenes which I witnessed at their bedside, —scenes which I cannot now recall without emotion,—urged me to try any remedy that gave promise of efficiency combined with greater safety. In the search for a substitute I tried rapid dilatation, which Ellinger and others had proposed, and since that year—that *annus iræ*—I have not once performed Sims's operation for dysmenorrhœa, and I have so narrowed the field for the use of tents that I now very rarely resort to them. In short, rapid dilatation has proved, in my hands, so safe and so efficient an operation that I wish to urge its claims before this Society.

The instruments which I would recommend are two Ellinger dilators of different sizes. These are the best, on account of the parallel action of their blades. The smaller of these dilators has slender blades, and it pilots the way for the other, which is more powerful and with blades that do not feather. I have had the beak of this dilator changed from an obtuse angle to a slight curve, so that it can be reversed within the womb. The lighter instrument needs only a ratchet in the handles, but the stronger one should have a screw with which to bring the handles together. Lest the beak should hit the fundus uteri and seriously injure it when the instrument is opened, the blades are made no longer than two inches, and are armed with a shoulder which prevents further penetration. The larger instrument opens to an outside width of one and a half inches, and it has a graduated arc in the handles by which the divergence of the blades can be read off. The instruments which I now exhibit to you, and which I can recommend highly, have been made under my supervision by Messrs. J. H. Gemrig & Son, of this city.

In a case of dysmenorrhœa or of sterility from flexion or from stenosis, my mode of performing the operation of rapid dilatation is as follows. The patient is thoroughly anæsthetized, and a suppository containing one grain of the aqueous extract of opium is slipped into the rectum. She is then placed on her back and drawn to the edge of the bed, the knees being supported by her nurse. The light must be good, so that the operator may clearly see what he is about. By the aid of a strong tenaculum, applied through my bivalve speculum, the cervix is steadied and the smaller dilator is introduced as far as it will go. Upon gently stretching open that portion of the canal which it occupies, the stricture above so yields that when the instrument is closed it can be made to pass up higher. Thus, by repetitions of this manœuvre, little by little, in a few minutes' time a cervical canal is

tunnelled out which before could not admit the finest probe. Should the os externum be a mere pin-hole or be too small to admit the beak of the dilator, it is enlarged by the closed blades of a straight pair of scissors, which are introduced with a boring motion. As soon as the cavity of the womb is gained, the handles are brought together. The small dilator being now withdrawn, the larger one is introduced, and the handles are then slowly screwed together. If the flexion be very marked, this instrument, after being withdrawn, should be reintroduced with its curve reversed to that of the flexion, and the final dilatation then made. But in doing this the operator must take good care not to rotate the womb on its axis, and not to mistake the twist for a reversal of flexion. The ether is now withheld and the dilator kept *in situ* until the patient begins to flinch, when the instrument is closed and removed. A few drops of blood trickle out of the os. Occasionally a slight flow of blood will last for several days after the operation, simulating the menstrual flux. Often this flux is precipitated, or renewed, if the operation follows or precedes it too soon. The best time for dilatation is therefore midway between two monthly periods.

When compared with the cutting operation, this one looks like rough usage; yet the woman rarely needs more than two or three suppositories, and complains merely of soreness for one or two days. To forestall any tendency to metritis, she is kept in bed until all tenderness has disappeared. Pain is met by rectal suppositories of opium and by large poultices laid over the abdomen. I have seen slight pelvic disturbance arise from this operation, but it has always been readily controlled, and has not given alarm.

In the great majority of cases I dilate the canal not to the fullest capacity of the instrument, but to one and a quarter inches. Sometimes in an infantile cervix, which does not readily yield and might give way, the handles are not screwed down more than three-quarters of an inch or an inch. Tearing of the cervix has happened in two of my cases, from the slipping out of the instrument. In one, that of a virgin, the cervix was split halfway down to the vaginal junction. The other case was that of a multipara, whose uterine canal had been nearly closed up by applications of silver nitrate made by her physician with the view of curing what he supposed was an "ulceration of the os," but which was a bilateral laceration. The tissues, rendered cicatricial and brittle by the caustic, were torn by the dilator for about half an inch on the right side also. Here the hemorrhage was free enough to need styptic applications and a tampon. I could have stopped it by wire sutures, but this was not done, as it would have defeated the object of the operation.

For slight dilatations, such as for the office treatment of anteflexions and of stenosis, or for the introduction of the curette, or of the applicator armed with cotton, the more delicate instrument is quite strong enough, and an anæsthetic is not needed. Sometimes in a very sharply-anteflexed womb the dilator cannot be made to pass the os internum. This difficulty is overcome by first passing in a surgeon's probe, and then, along it as a guide, the dilator.

After a forcible dilatation under ether, the cervical canal rarely returns to its previously angular or contracted condition. Since lateral extension of elastic bodies antagonizes their length, the cervix shortens and widens, and the plasma provisionally thrown out by the submucous lesions sustained by the dilated part serves still further to thicken and stiffen its tissues. In other words, the stem-like neck of the pear-shaped womb is shortened, widened, strengthened, and straightened. Hence, for straightening out anteflexed or congenitally-retroflexed wombs, and for dilating and shortening the canal in cases of sterility or dysmenorrhœa arising from stenosis or from a conical cervix, the dilator will be found a most efficient instrument. In its results it is not infallible; I have twice been obliged to repeat the operation, and would like to have done so in several other cases had the women permitted it. In a very few instances I have been forced, as a final resort, to nick a pin-hole os externum; but I had not then learned how far I could safely stretch open the uterine canal, and the operation of dilatation was not so efficiently performed by me as it is now through a larger and riper experience.

But it is not to cases of dysmenorrhœa that I limit the operation of rapid dilatation. As stated before, I use it to stretch open the canal for the admission of the

curette and of sponge-tents, or for the purpose of making applications to the uterine cavity. In cases needing the irrigation of the uterine cavity I first dilate the canal with this instrument and introduce the nozzle of the syringe between the separated blades. This gives a free avenue for the escape of the liquid, and robs of its dangers this form of intra-uterine medication. I also resort to the dilator in order to explore the womb with the finger. For instance, in any given case of menorrhagia in which a polypus or some other uterine growth is suspected, instead of using tents, I put the woman under an anæsthetic, and, after the rapid dilatation of the cervical canal to the utmost capacity of the instrument,—viz., one and a half inches,—am enabled to pass my finger up to the fundus. This is accomplished either by drawing down and steadying the womb by a volsella forceps, or in thin subjects by forcing the womb down upon the finger through supra-pubic pressure on its fundus. In this way I have, over and over again, at one sitting discovered a uterine growth, twisted it off, and removed it. Usually in these cases I experience more difficulty in removing the polypus or other growth through the small canal than in twisting it off from its uterine attachment. It often has to be wire-drawn before it can be removed, and sometimes the os uteri has needed a few nicks. Usually when the menorrhagia is free the cervical tissue is so lax that there is no difficulty in the introduction of the index-finger up to the fundus, but sometimes only its tip can be made to pass the os internum. Yet even this limited degree of penetration is commonly quite enough to decide the presence of an inside growth. If it be not enough, I invariably search for a growth with a small pair of fenestrated forceps, and I have repeatedly seized and removed one the existence of which was merely suspected. After such operations the uterine cavity is thoroughly washed out with a solution of carbolic acid or of potassium permanganate.

I am sorry to say that I have not kept full records of all my cases of rapid dilatation. For instance, I have never recorded those office cases of dilatation in which ether was not given. Nor has any note been made of cases in which dilatation was performed under ether for curetting, for digital exploration of the endometrium, or for the removal of uterine growths. I have tabulated merely cases of dysmenorrhœa in single or in married women. In the married, with but three exceptions, which will be noted, painful menstruation was associated with sterility.

Including all the cases of dilatation performed under ether, I must have had over three hundred. I have limited myself to these cases because the use of an anæsthetic implies full dilatation,—one in which serious injury, if ever, would most likely be sustained. Yet there has not been a death, or a case even of serious inflammation, in my practice, and the results have been most satisfactory,—far more so than when the cutting operation was performed by me. The following are the statistics of my cases of dysmenorrhœa: single, 80; married, 88. Total, 168.

Of the unmarried, eighteen were unheard from after the operation, leaving sixty-two from which any data could be obtained. Of these, thirty-eight were cured, seventeen more or less improved, and seven not improved at all. Of these seven that were not benefited by the operation, five subsequently had their ovaries removed,—one of them by another physician and four by myself: of the latter, one died. In each one the ovaries had become so altered by cystic or by interstitial degeneration as to make the dysmenorrhœa otherwise incurable. Of the seventeen improved, there was one on whom öophorectomy was also performed; for, although the dysmenorrhœa was greatly relieved by dilatation, ovarian insanity and menorrhagia were not. The operation was a successful one, and my patient was not only cured of her hemorrhages, but she regained her reason. Out of these cases, the majority, although not wholly cured, were greatly improved. For example, one of them was formerly bedridden during the whole period of her menstrual flux, and had then to take large doses of morphia. She also suffered at those times from hæmatemesis and epistaxis. Since the operation she experiences pain for merely two hours, needs no anodyne, and has lost her ectopic hemorrhages. Her gain in health and flesh has been great. Another one, who was wholly crippled by her sufferings and made nervous by the dread of them, is now a busy nurse. For one hour at every period she

suffers a great deal; but she is too much afraid of taking ether to have a second dilatation performed.

Of those cured, two had Sims's operation performed previously without benefit, and were afterwards dilated; two were dilated twice before a cure could be brought about. The history of several cases merits more than a mere allusion. The sufferings of one of my patients at every monthly period had always been great, but while she was at a boarding-school they grew so intense as to cause furious delirium at those times. This finally developed into permanent insanity, with suicidal impulses. While in this condition she was placed in my hands. After rapid dilatation of the cervical canal, the dysmenorrhœa wholly disappeared. The exemption from pain toned down some of her more extravagant delusions, but she did not wholly regain her reason until a few months afterwards. She is now free from all menstrual pain, and in the complete possession of her mental faculties.

A Hebrew lady, whose health had suffered from dreadful dysmenorrhœa, was so much improved at one sitting that her physician and friends were amazed. Not long afterwards the doctor asked me to perform this operation upon another one of his patients, who was, if anything, worse. Her sufferings were so intense that he wrote, "I fear that another period might kill her," and urged an immediate operation. The cervix in this case was conical and very dense. Fearing a tearing of the parts, I screwed the instrument slowly up to one and a quarter inches, and kept up this amount of dilatation for some twenty minutes. The cervix sustained no injury. The canal has since remained patulous, and she is free from all menstrual pain.

Of the married, fifty-three were heard from. Of these, thirty-nine were cured, ten improved, and four unimproved. Out of these fifty-three cases, nine were not in a condition to conceive, three of them from fibroid tumors, two from destructive applications of nitrate of silver to a lacerated cervix, three from being over forty-one years of age, and one from being a widow. This leaves but forty-four capable of conception, and of these, eight, or a little over eighteen per cent., became pregnant. But the ratio is in fact larger, for several of my patients, fearing pregnancy, employed preventive measures after the operation. Then, again, I believe that others, who consulted me merely for painful menstruation, have not reported their subsequent pregnancies. For instance, two months ago I learned through the merest accident that the wife of a clergyman, whose cervical canal I dilated six years ago, has since been making up for lost time by giving birth to twins within a year after the operation, and later to several other children. She had been married eight years before she came to me, and had had her cervical canal dilated by tents and slit up with Peaslee's metrotome by a skilful surgeon. I have also had several cases of pregnancy following office-dilatations of the uterine canal, in which ether was not given, and consequently the lumen of the canal was not much enlarged. But such slight operations were not deemed worthy of record, and they therefore have no statistical value.

CLINICAL ASPECT OF SOME PERIPHERAL PALSIES.

BY LAMBERT OTT, M.D.,

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IN glancing over the neurological literature of some of our recent and standard works on the practice of medicine, I find only a brief mention or an entire omission of some of the commoner forms of peripheral palsies, leading one to infer that they rarely occur or do not happen at all. Even some of those omitted I find to be very common, so that a short account of their clinical aspect will not be out of place. In degree of frequency the different parts of the body are affected in the following order: first the nerves of the face and neck, then the upper extremities, and lastly the lower extremities. I shall only mention some of those of the extremities.

Case I. Paralysis of Musculo-Spiral Nerve.—C. C., æt. 40 years, a book-canvasser, intemperate. Two weeks ago, after drinking heavily, he fell asleep with his arm resting over the back of a chair. In two hours he awakened, experienced nothing wrong, went home, and slept well that night. The next morning he noticed a numbness in the back of the forearm, and a tingling and numbness in the hand, extending along the dorsal surface of the fingers, with an inability to lift the hand. In a few days the tingling disappeared,

the loss of power in hand and numbness of dorsal aspect of thumb remaining.

Present Condition.—Has marked wrist-drop. By great effort he can lift his hand midway between flexion and extension. When the wrist is supported he can extend the two distal phalanges and adduct and abduct the fingers by the aid of the lumbricales and interossei. Supination and pronation are perfectly performed. He describes a numbness extending over the posterior interosseous space of forearm and dorsal aspect of thumb. Pressure over this space elicits tenderness. He can extend the last phalanx of thumb. When the wrist is supported he has normal grasp-power, and when unsupported he can grasp firmly only small objects. Flexion and extension of forearm are normal. No loss of sensation. Surface-temperature of extensor side of right (sound) forearm, 95°; left, 94°. After faradizing paralyzed muscles, surface-temperature, right 95°, left 95½°. There is slightly-diminished faradic contractility.

He was treated with counter-irritation over the course of the posterior interosseous nerve, and the labile descending galvanic current was applied to the nerve and muscles. He made a slow recovery.

This is a very common form of palsy, and presents many different degrees. It bears a great resemblance to the wrist-drop of lead-palsy, but is easily differentiated. The latter is generally bilateral, is usually accompanied with or preceded by symptoms of plumbism. Another differential point given by authors is that in paralysis of the musculo-spiral nerve you have loss of the power of supination, whereas in the paralysis of plumbism the supinator muscles are never involved. In reviewing my cases of musculo-spiral palsy, I find that this distinguishing point must be received with some allowance, as in all my cases of pure nerve-paralysis, even where the loss of power of extensor muscles was complete, supination was nearly normally performed.

When the nerve is injured high up, the triceps muscle is paralyzed. Then you may have, as in one case of mine (where the nerve was injured during the birth of the child), loss of power to extend the forearm and of supination of the hand. Erichsen, in his book on Concussion of the Spine, reports cases of paralysis of this nerve in fracture of the shaft, lower condyle, and lower epiphysis of humerus, in which the supinator muscles were not at all or but slightly impaired. Dr. S. W. Mitchell, in his "Injuries of Nerves," reports a case of injury to this nerve by the fragment of a shell, in which the extensor muscles of the thumb and fingers were completely paralyzed, whilst the actions of the supinators longus and brevis were but slightly impaired. In the same work he reports a case of injury to the median and ulnar nerves, in which the supinator longus muscle was paretic. The remaining muscles supplied by the musculo-spiral nerve were normal. There are various causes of paralysis of this nerve, the most fruitful being compression in intemperate men, where the arm is in some malposition whilst the muscular system is thoroughly relaxed by the intoxication.

Case II. Compression of the Median Nerve.—J. J., æt. 39 years, tailor. Had syphilis some five years ago. Is intemperate. July 5 he was drinking heavily, and fell asleep on his left arm. The next morning he noticed numbness in the left thumb, index, and middle fingers. He worked till July 11, when the numbness, and especially the weakness in the digits, mentioned, compelled him to cease. He has now, ten days after the accident, numbness of ends and palmar surfaces of thumb, index, middle and outer half of ring fingers, and of radial half of palm. There was also a space of numbness over the dorsal surfaces of the thumb and index-finger, involving in some way the radial distribution. Over the anæsthetic parts described he could not feel two points of the æsthesiometer ever so far apart. Compression over the course of the nerve elicited no tenderness. He could feebly flex, abduct, and adduct all the fingers, but the muscles having these functions were decidedly paretic, as the dynamometer registered 60 less as compared with the healthy side. The electrical condition was hyperexcitability to the galvanic current and slightly impaired faradic contractility. He was treated with rest to the parts, continuous current and counter-irritation over the course of the nerve. After four weeks of treatment he was markedly improved.

It is difficult to account for the anæsthetic surface on the dorsal aspect of the thumb, except by an interchange of sensory fibres between the median and radial nerves, or, as quoted by Alen,* W. O. Schnitzer infers from clinical data that the dorsal surfaces of some parts of the thumb, second, and third fingers have their cutaneous supply from the median nerve.

The median nerve, to the exclusion of

* Lähmungen der Armnerven, etc. Berlin, 1876. Abstract in Centralblatt für Med. Wissen., 1878, xvi. 190.

other nerves, is not so often affected with paralysis as the musculo-spiral; for it to be paralyzed in conjunction with other nerves coming from the brachial plexus is much more common. Generally the median and ulnar suffer together. Not uncommon causes of injury to this nerve are ill-adapted crutches, awkward venesections, rheumatism, etc.

Case III. Paresis of Ulnar Nerve.—K., æt. 80 years, watchmaker, a very healthy and vigorous old man. Has always worked with his right elbow resting on a table. In November he began to have symptoms of vesical catarrh, which undermined his health considerably. About this time he noticed a tingling and numbness in the distal ends of the little and ring fingers, and later his power of grasp became impaired. He was unable to hold his tools firmly in the hand. When I first saw him he had loss of sensation in palmar surface of little and inner half of ring finger, and in ulnar third of palm. The anæsthesia of the dorsal surface of hand was not sufficiently distinct to enable me to map out the ulnar distribution. His grasp was weak, the whole hand being affected, but the little finger and adduction of thumb to a greater degree. Pressure over the ulnar nerve elicited tenderness and a tingling in the ends of the inner two fingers. He abstained from work on account of the bladder-affection, to which I gave my whole attention. After this was removed and his general health had improved, his hand-weakness became prominent, but was soon relieved by counter-irritation, galvanism, and iodide of potassium internally.

This man had been leaning on his ulnar nerve probably for half a century, has never had a day's sickness in his life, and only when he is run down by a bladder-trouble did this paralysis manifest itself. Why it should take place just at this time can be explained in one of two ways. The previous ill health the man had been laboring under reduced the amount of areolar tissue, thus diminishing the natural protection and exposing the nerve to pressure, or his run-down system predisposed the nerve to disturbance from slight causes. Another fruitful cause is injury to the elbow-joint, as in a case of mine where there was a dislocation of the fore-arm backwards; after the reduction, the joint swelled, tingling and a drawing sensation appeared on the ulnar side of the hand and palm, followed by paralysis and atrophy of the muscles supplied by this nerve, which has not passed away to this day, four months after the accident. When paralysis of the ulnar nerve is complete, a peculiar deformity develops,—claw-hand,—which is due to the unopposed action of the antagonistic muscles of the interossei.

Case IV. Paralysis of the Peroneal Nerve from a Novel Way of Compression.—A. B., aged 30 years, pocketbook-maker. August 25, being out of work, he paved his yard with bricks, which required continual stooping. The third day he felt lame and sore from the extreme flexion of the knees, the left being the worst. He had great difficulty in rising from the stooping posture. A few days' rest restored the right leg entirely, the left continuing weak. He had at the time no fever, no muscular twitching, and no pain. Otherwise he was in the best of health.

Present Condition.—In walking, his left foot falls in extreme extension, and he lifts the foot by flexing the thigh, in order to prevent the toes striking the floor. He cannot flex, abduct, or adduct the foot, nor extend the toes,—movements produced by muscles supplied by the peroneal nerve. When any of these acts were attempted, there was involuntary extension of the foot. Sensation was lost on the outer aspect of leg, distinctly mapping out the sensory distribution of the peroneal nerve. Plantar reflex impaired, patellar reflex normal. Pressure over the nerve produced no pain. Electrical condition: both nerve and muscle show diminished faradic contractility. In the nerve the galvanic current gave Ca cc > An cc. The muscle, Ca cc = An cc. Surface-temperature (over anterior tibial group of muscles): left, 95°; right (sound) side, 97°.

He was treated by a labile descending galvanic current over nerve and muscles, rest, and potassium iodide internally. He did not improve after being under treatment three weeks, and left.

This paralysis was evidently due to compression of the nerve by the prolonged and extreme flexion of the knee-joint.

In support of my belief that this was the cause, I have the following experiment. Place an index-finger horizontally in each lateral half of the popliteal space; then stoop, bringing the entire weight of the body on the extremely flexed knee, and in trying to pull out the fingers you will find the outer fingers grasped more firmly: thus demonstrating that the outer lateral surfaces are brought in closer apposition than the inner.

Given a case of localized paralysis, by what points are we to distinguish whether it be central or peripheral?

PERIPHERAL PARALYSIS.	CENTRAL PARALYSIS.
Generally unilateral, and situated in the distribution of an individual nerve.	Usually bilateral when spinal, hemiplegic when cerebral.
Muscular atrophy.	No atrophy, unless multipolar ganglion-cells of anterior horns of gray matter are involved, and in those cases muscles are paralyzed which have different nervous supply, lying on opposite sides of the limb.
Paralysis first, and atrophy follows.	In progressive muscular atrophy there is also atrophy, but paralysis keeps pace with the atrophy.
Disturbances of sensation.	Seldom marked disturbance of sensation.
If of long standing, electro-muscular contractility absent, or the reactions of degeneration may be found.	Electro-muscular contractility only slightly impaired, except in infantile and adult spinal paralysis, where there is either lost electrical excitability or the reactions of degeneration; then the history of the case is a guide.

Paralysis due to compression or inflammation of the nerve presents important differences. In inflammation we have pain or elicit pain on pressure, which is seldom the case in paralysis due to pressure; and, if decided pain is found, we may conclude that there is more or less inflammation. Peripheral palsies are due to various forms of pressure, such as inflammatory products, cicatrices, callus, tumors, passage of fœtal head through pelvis, fæcal accumulations, muscular spasm, obstetric forceps, malposition of the extremities, and ill-fitting crutches. Where the pressure is temporary, at first both motion and sensation are affected, but the motor palsy lasts longer and is more profound.

The pathology of peripheral palsies has not been thoroughly investigated. S. W. Mitchell, after some experiments on nerves by compression where post-mortem examinations were made, states "that in all cases were noted some evidences of congestion, but the chief lesion lay in a very extensive disturbance of the contents of the nerve-tubes."

Prognosis is generally favorable. Where the cause has been only temporary and the paralysis partial or complete, it will require six to eight weeks to effect a cure. In cases of paralysis with atrophy, the prognosis is not so favorable as to a complete cure, but the palsy may be improved. The electrical condition of the muscles will give the best clue to base a prognosis upon. If there is no diminished electro-muscular excitability to either current, then the case is favorable. If the muscles do not respond to the faradic current, but to the interrupted galvanic, giving An cc > Ca cc, there is hope, after a long time of treatment, of restoring the parts to usefulness. When all electrical response is absent, the case is probably beyond a cure; but even then the interrupted galvanic current should be tried.

Treatment.—If the palsy be due to an acute or chronic neuritis, rest, soothing applications, and the ordinary antiphlogistic course should be ordered. In chronic neuritis nothing will yield more charming results than blisters over the course of the nerve. Iodide of potassium internally also acts well. Electricity should not be used in acute neuritis. Should the muscles respond to the faradic current, gently faradize three times weekly. If the muscles do not respond to this current, use the interrupted galvanic, placing that pole on the motor point of the muscle which obtains the minimum of contraction from the smallest number of cells. In compression-paralysis, if you find a spot of tenderness in the course of the nerve, use a blister. Otherwise nothing much can be done but to wait, keep up the tone of the muscles with electricity, and apply a constant descending current over the course of the nerve, in hopes of producing some healthy change in the nerve-structure itself.

FOREIGN BODY IN THE EYE CAUSING SYMPATHETIC OPHTHALMIA.

Read before the Philadelphia County Medical Society, September 17, 1884,

BY M. LANDESBERG, M.D.

I HAVE the honor to exhibit to you, Mr. President, to-night, one of the most interesting cases I have ever had the good luck to meet with in my practice.

This gentleman, 41 years of age, had

the misfortune of being struck by a splinter of metal in his left eye, July 13, 1881, about six weeks after he had come to this country. Blindness set in within ten minutes after the accident. He applied on the same day at Wills Eye Hospital, where he was advised to have the eye removed at once. Not quite relishing this prospect, he went to the Jefferson Medical College, where he was admitted for treatment after he had refused the enucleation, which was also at first proposed to him. There he remained for six weeks, during which time the incident inflammation passed off entirely. The globe was preserved, but vision was not restored. He enjoyed good health until March, 1882, when the first symptoms of sympathetic disorders began to develop in the right eye. Asthenopic troubles made their appearance, followed by sensitiveness to light and photopsies. The acuteness of vision gradually diminished as well for distant as near objects.

And now he began his wanderings from one oculist to the other: he hardly spared one, if I have to believe his testimony. Nothing was done for the benefit of the right eye, which changed from bad to worse. Enucleation of the left eyeball was pronounced by all authorities as the ultimate ratio by which the condition of "nervous irritation" in its fellow might possibly be checked.

When I saw the patient for the first time, September 5, 1883, I ascertained the following condition: No irritation whatever in either eye. Vision of the right eye was $\frac{1}{20}$; with convex 40, $\frac{1}{15}$. Pupil of normal shape, but of somewhat sluggish reaction; accommodation is impaired in consequence of paresis of the accommodative muscle. With naked eye, patient reads Jaeger 13 at about fifteen inches' distance; with the help of convex 10, Jaeger 3 at eight inches'. Field of vision and tension are normal. There exists an eccentric positive scotoma outside of the point of fixation. The subjective complaints are of photopsies and scintillations. Ophthalmoscopic examination reveals no morbid changes.

Left eye counts fingers at two feet peripherically outwards. The cornea shows a linear horizontal cicatrix on its lower third, running from the outer corneal margin towards the pupillary region. The lower half of the iris is disorganized, and presents in its middle a funnel-shaped depression, and close to its temporal border a mound-like elevation. The pupillary margin of this segment of the iris is connected by three blackish filaments with the dense opaque whitish membrane which stretches across the whole pupillary plane, filling up the latter to the greatest extent, even after the pupil had been dilated by a mydriatic.

The presence of the above-described "depression and elevation" in the lower half of the iris, which were situated just opposite the corneal scar, aroused my suspicion that the foreign body might possibly lie embedded in this region. An operation for the removal of the foreign body seemed to me to be a matter worth trying at first, by which nothing was risked and everything might be gained. The enucleation of the eyeball I regarded as the last expedient to which I would resort if I should be baffled in my intentions.

I spoke with the patient to this effect, telling him that I must have full liberty to act according to my best judgment, and to be allowed to enucleate the eyeball if I should fail to extract the foreign body.

He took time for deliberation and reflection until May 19, 1884, when he returned in the following condition. In the mean while he had repeated and completed his circuit among the specialists.

Vision of right eye, $\frac{1}{80}$; with convex 60, $\frac{1}{20}$; complete paralysis of the muscle of accommodation. With the naked eye he reads Jaeger 16 at eighteen inches' distance; with the help of convex 10, Jaeger 5 at ten inches'. The shape of the pupil is normal, its reaction sluggish. The visual field is somewhat limited in the upper sector, and its outer-upper quadrant is occupied to the greater extent by the eccentric positive scotoma. Patient sees all objects as through a veil, and is greatly annoyed by photopsies and scintillations, and by the perception of a bluish flame, which constantly occupies the centre of the visual field. He complains, besides, of the most various abnormal sensations in and around the globe, of a feeling of pressure in the depth of the orbit against the eyeball, of pains in temples and forehead, of sensitiveness to light, etc.

The ophthalmoscopic examination reveals venous hyperæmia of the retina. Optic disk is pinkish-red, of somewhat indistinct tints.

The condition of the left eye has not changed.

I operated upon the left eye in the following manner. I made a section at the sclero-corneal border, just within the limits of the morbid changes in the iris, introduced Liebreich's iris-forceps, grasped the whole segment of the iris which contained the "depression and elevation," drew it out and cut it off. No foreign body was found in the excised piece of iris. Now I again introduced a pair of forceps, caught the membrane, which covered the whole pupillary region, and managed to remove it entirely. On inspection, a small oblong piece of metal was found embedded in the posterior surface of the lower end of the membrane. Considerable hemorrhage followed the operation, and a few drops of vitreous escaped from the wound. A compressive bandage was applied on both eyes.

No reaction whatever followed the operation, and the healing process took place most favorably. The bandage was removed on the third day.

When I examined the patient on the eighth day, the condition was as follows: Vision of the right eye, $\frac{12}{15}$; with convex 72, $\frac{12}{12}$. Jaeger 12 is read at fourteen inches' distance with the naked eye. Subjective complaints greatly abated. No photophobia and lachrymation. Scotoma somewhat more transparent.

The left eye shows a very fine artificial pupil. The hemorrhage in the anterior chamber is only partly absorbed. Vitreous contains blood and dense floating opacities.

This remarkable improvement in the condition of the right eye had taken place without any other influences having been brought to bear upon it but the extraction of the foreign body. I abstained from all therapeutics during the eight days, and no more forcible proof of the sympathetic nature of the affection can be adduced than the spontaneous recovery after the cause of irritation had been removed.

An alterative and derivative treatment, which I now instituted, had the following effect. Vision of the right eye is at present $\frac{12}{8}$. The pupil is of normal reaction; the accommodative paralysis has greatly improved. His punctum proximum is at fifteen inches, and he reads, with the help of convex 10, the finest print (Jaeger 1) at six inches' distance. The visual field is normal, and the scotoma has contracted to an oblong rod of about two inches in length and of one-eighth inch in diameter. This scotoma is transparent, and does not interfere with vision. All subjective complaints and perceptions have vanished, with the only exception of the bluish flame, which, however, but faintly and only occasionally appears in the visual field. Background of the eye is normal.

Vision of the left eye is $\frac{1}{10}$, and may possibly improve still more in the future. There still are large floating opacities and some bloody streaks in the vitreous. The background of the eye can only dimly be seen. There are morbid changes in the retina and choroid, due to inflammatory processes which had taken place in these parts.

You have, gentlemen, before you a case in which a foreign body had penetrated into the eyeball, causing traumatic cataract and consequent morbid changes in the uveal tract and retina. The lens is absorbed, and a thick, opaque membrane (secondary cataract) obstructs the whole pupillary region. The foreign body remains embedded in the posterior surface of the lower end of this membrane for nine months, without doing any harm. Then the right eye begins to show symptoms of sympathetic trouble. Amblyopia and paralysis of the muscle of accommodation develop. And while these morbid changes of the most serious character take place, no inflammation proper, no objective irritation, can be observed in either eye. The injurious influences, which have continued to work for two years, are checked at once by the removal of the foreign body. The secondarily affected eye makes a marvellous recovery, which far surpassed all my hopes and expectations. Such a vision of $\frac{12}{8}$ is only met with in very rare instances; and the primary injured eye, which was not considered worth while being preserved, improves to such a degree as to enable the patient, should he have the misfortune to lose his right eye, to find his way in the streets, to recognize faces, to distinguish features, and eventually to gain a living by peddling, etc., if need should be. This case may justly be called a triumph of conservative surgery.

I take exception to the practice of all those surgeons who resort without further delay to enucleation in instances of injury to the eyeball with loss of vision. In

all cases in which there is no foreign body in the interior of the globe, we should abstain from operative interference and watch the eye with care. There is no danger in waiting. Sympathetic irritation is not likely to occur immediately after the injury. Enucleation itself is not so harmless as it is generally represented in text-books. It may sometimes give rise to sympathetic irritation, and I would impress this fact upon the general practitioner. It is not indifferent to the patient whether his blind eye be removed or not. A blind eye looks, in the greatest majority of cases, better than the artificial one, and we have to give to the patient the benefit, as long as it is compatible with the safety of the other eye. It is a matter of æsthetics. If a foreign body has penetrated the eyeball, the first indication is to remove it with an electro-magnet. If it cannot be found, and there is traumatic cataract, I would at once remove the latter: the body may be embedded in it. Should this removal fail, I advise enucleation at the same sitting. The foreign body extracted in this case was about three millimetres long, and of metal.

HYDROCHLORATE OF COCAINE IN AURAL AND OTHER CASES.

BY H. C. BOENNING, M.D.

ON November 3, 1884, I was requested to call on Dr. L. R. K. and remove a piece of cinder that had been embedded in the cornea. I found on examination that the cinder was firmly fixed in the cornea and surrounded by an area of discoloration. Efforts at extraction provoked intense suffering, and I determined to use cocaine to test its anæsthetic virtues. I obtained a weak solution from Dr. L. W. Fox, and dropped four drops every three minutes into the eye, using sixteen drops. In a few minutes the pupil dilated and the cornea was insensible. I removed the foreign body without causing the slightest pain. The cornea continued anæsthetized for nearly two days; the pupil remained dilated for a day longer, but gradually returned to the normal. Accommodation was not interfered with to any extent, J. No. 1 being read with the aid of the patient's ordinary glasses at ten inches. A curious symptom observed was a marked dryness of the throat and mouth, which passed off in the course of a day.

Since then I have used the cocaine in other eye cases. In a case of ulceration of the cornea accompanied with severe pain, the instillation of the cocaine was followed by a marked relief of all pain and a diminution of the attendant conjunctival injection. The photophobia present was not influenced by the cocaine; severe suffering was produced by exposure to light; but the constant pain attendant on the ulcer was relieved. The next day I tapped the anterior chamber, and the patient is now well.

About the middle of last month a child was brought to my office for ear-trouble. The history revealed an attack of scarlet fever two years ago, followed by deafness and a discharge from the meatus. An examination proved marked loss of hearing, but I could not determine anything more, the slightest contact with the ear producing pain and exciting the girl so much that the mother interfered. I ascertained that discharges of blood occurred from time to time, and that at first, when the child held her nose and mouth and expired, a hissing noise in the ear could be heard. I obtained the child's consent to an examination if it could be done painlessly, and forthwith used a strong solution of cocaine (eight-per-cent. solution), dropping about thirty drops of this into the ear in the course of half an hour, although much of the fluid overflowed the meatus. Ten minutes after the last drops were used I opened the meatus with a small bivalve ear-speculum and found it contracted by a growth—which partly filled the canal—of a pale-reddish color, bleeding slightly upon touch. The child (Mabel C. L.) felt the manipulation, but no pain was produced. Forcible expiration produced a hissing sound, and my diagnosis—vascular polypus with perforation of the membrana tympani and chronic catarrh—was confirmed. The next day the patient appeared for operation, and after using the cocaine again (although the parts were still numb) I removed the growth and washed out the ear, no pain of any consequence being caused. The case is progressing excellently, and I hope soon to close the perforation, which is near the lower portion of the membrane, being a circular hole with thickened edges.

My own child—a boy 26 months old—a week ago developed a small follicular abscess of the meatus auditorius, accompanied by pain, feverishness, and wakeful-

ness. I used the cocaine in his case twice in twenty-four hours with much relief. The next day I opened the abscess, which, of course, permanently relieved him.

November 5, Mr. Barcus, a student at medicine, kindly permitted me to drop some cocaine solution into his ear, the result being similar to the above cases. The canal was benumbed. A probe and speculum, which in the other ear caused pain when twisted or moved from side to side, was felt in the anæsthetized ear, but no pain was caused.

I would note, in no case were any unpleasant symptoms produced except in that of Dr. K., where dryness of throat was marked. This may, of course, have been a mere coincidence. In ear cases the solution should be much stronger than in eye cases, otherwise the effect will be neither so prompt nor so satisfactory.

528 Franklin Street.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF WM. PEPPER, M.D., LL.D.,

Provost of and Professor of Clinical Medicine in the University of Pennsylvania.

Reported by William H. Morrison, M.D.

CHRONIC INTESTINAL CATARRH.

GENTLEMEN,—I wish to again show you the man suffering with chronic diarrhœa whom you saw some time ago. He is now much improved. As you will remember, he has been suffering from a general catarrhal inflammation of the mucous membranes for at least eight years. There is probably in this patient a constitutional predisposing tendency to this affection; for without any unusual exposure he passed into this condition of catarrhal inflammation. Eight years ago, as a result of some little indiscretion, he began to suffer with dyspepsia. After three years he recovered from this attack, but was still subject to spells of dyspepsia on the least impropriety in eating. For the past two years he has been suffering with this irritation of the mucous membrane, chiefly of the larger bowel. When the irritation would subside, there would be atony, defective secretion, and constipation; then would follow colicky pain, griping, purging, and anorexia. This would pass away, and a state of constipation and torpor succeed. So it has been, up and down, for the past two years; but, on the whole, his course has been steadily downwards. The stools were liquid, and largely mixed with mucus. At times they would consist almost entirely of mucus, with but little fæcal matter.

The location of the pain, the considerable amount of mucus in the stools, the fact that gastric digestion was not much affected, and that there was not nearly as much prostration of the general health as we should have expected had the disease involved the higher portion of the alimentary canal,—all indicated that the disease was chiefly in the larger bowel.

In considering this case, I pointed out to you the great importance of rectal medication, and that in many instances the use of suppositories or enemata was the only way in which the disease could be cured; and that, under this plan of treatment, the recoveries were often remarkable, while the continued use of medicines by the mouth might prove ineffectual. By this plan the stomach can be reserved for the administration of tonic remedies.

In this case I ordered an injection of four ounces of water containing one grain of nitrate of silver and fifteen drops of deodorized laudanum to be thrown into the bowel, and the following to be administered by the mouth:

℞ Strychninæ sulph., gr. ⅓;
Acidi hydrochloric. dil., ʒij;
Tinct. gent. comp., q. s. ut ft. ʒiv. M.
Sig.—A teaspoonful before meals.

Under this treatment, decided improvement has taken place. The tongue looks better, and the diarrhœa is not so marked. The treatment will be continued. The restricted diet will still be insisted on, and the patient kept in bed most of the day, being allowed to be up a short time to take moderate exercise.

I have seen a number of remarkable results from even such simple injections as the one used in this case. A chronic dysentery is sometimes kept up by a trifling patch of inflammation in the rectum or sigmoid flexure. I have had a number of patients come to me who had been under treatment for years. They would have two or three loose stools in the morning, and then be comparatively comfortable all

through the day. Change of diet would have but little effect. There would be some colicky pain across the lower part of the abdomen and in the line of the large intestine, and not much about the umbilicus; the appetite pretty good, and the tongue clean, although rather pale. I have seen such cases which had existed many years, and in one of them the disease had lasted fifteen years, and had resisted all kinds of remedies. Thinking that there might be some inflammation of the lower bowel, I have ordered a few injections, and have had the patients return in a short time, stating that they had been cured by eight or ten injections of a simple character, so that it would scarcely seem credible that such long-standing trouble had been present. Of course, these are rare cases. There are, however, many cases of chronic diarrhœa which are beyond the influence of remedies administered by the mouth; and it is not until, by the use of medication addressed to the rectum, we have relieved some local catarrhal irritation, that we are able to effect a permanent cure.

Where the rectum is very irritable, and particularly where there are associated with it internal hemorrhoids, and possibly a disposition to looseness or diarrhœa, I wish to refer to the value of hot injections into the rectum, and especially such injections with the addition of some astringent. I know of no substance which is more agreeable as an enema than coffee. From half a pint to a quart of strong black coffee may be used, as hot as will be tolerated by the rectum. You have seen the beneficial effects of hot water in external inflammations in the form of hot-water dressings, in catarrh of the stomach in the form of hot drinks, and in uterine inflammation in the form of hot-water injections. In these cases of congestion and catarrh of the lower bowel, a good plan is to give in the morning an injection of hot water, and then at another period of the day, as at night, a second small medicated injection, and have the patient go to sleep and retain it.

On the other hand, I also want to call attention to the value of very small cold injections into the rectum in cases of irritable rectum. An injection of two ounces of water, as cold as the patient can bear without giving him a chill, retained all night, will sometimes act magically in relieving the irritation disposing to frequent discharges.

All of this simply goes to show the value of enemas adapted by your judgment to the different conditions of the system, and particularly the different local conditions: these constitute a valuable measure of controlling many conditions which too often are treated with medicines given only by the mouth, which never reach the spot.

IMPACTED CALCULUS.

This patient, a shoemaker, drank a great deal as a young man, and has drunk more lately. He has never had any venereal disease, but has been exposed a great deal; his habits have been irregular. Twelve years ago he had smallpox, and this was followed by rheumatism. Since then he thinks that his health has not been as good as before; but his dissipated habits may account for this.

Fifteen months ago he was much exposed to the wet, and, after about a week of general chilliness and discomfort, he began to have sharp darting pains over the crest of the left ilium, which grew worse and in a few days settled over the left kidney. The pains extended down the left groin, but not into the penis or testicle. There was also a constant desire to pass water, and the effort increased the pain. He got better, but still had soreness over the left kidney and along the crest of the ilium. Exercise and bad weather made this worse. At times he would have sharp spells of pain, and at such times would pass very little water. Four months ago he had another violent spell, and micturition became frequent and painful. Then he took a strong mixture of turpentine, and passed blood for several days. This acute attack subsided, and he returned to pretty much his usual state, except that he was more broken down. Before he came into the hospital, he had a similar attack, again took turpentine, and again had hemorrhage. On admission, there was pain over the left kidney, and darting and sticking pains ran around the crest of the left ilium. There was frequent micturition, but when the urine was examined it was found to be normal. The general health was run down. There was a distressing cough, and there was pain over the left lung. Physical examination revealed friction-sounds at the base of the left lung, and pericardial friction-sounds, a mitral

systolic murmur, and also a mitral presystolic murmur. There were evidences of pericardial adhesions in retraction of the tissues during systole. The lung did not advance over the heart during inspiration. There is a constant dull pain in the region of the left kidney and along the crest of the ilium, but there is no evidence in the urine of pyelitis. There have been several attacks of hæmaturia, and the blood seems to have come from the left kidney. This would suggest that there was a calculus in the left kidney; but there has been no continued evidence of inflammation of the pelvis of the kidney. Pyelitis reveals itself not only by pain, tenderness over the kidney, and attacks of lancinating pain in the line of the ureter, but also by changes in the urine, which throws down a considerable amount of pus, the supernatant liquid containing albumen rather in excess of the amount of pus present.

From the symptoms present, I am inclined to think that there is a calculus impacted in the substance of the kidney, and that attacks of congestion occur around it, which relieve themselves in the hæmaturia. As the stone has not gotten into the pelvis, pyelitis has not been established.

The progress of the case has not been satisfactory. He has been losing weight. Examining the lung, I find, at the left apex, impaired resonance and diminished fremitus, the vesicular murmur being absent. At the right apex there is marked resonance, and the respiration is rather puerile. There is a harsh systolic murmur over the apex, and friction-sounds are heard over the base of the heart.

The man, to-day, has a temperature of 102.5°. His tongue is clean, but rather glazed, and vividly red. Along its edges will be seen a number of pearly-white spots, which are very painful. These are minute aphthous ulcers, and, when they appear at a late stage of a chronic wasting disease, they are of bad omen. They are, however, not sufficient of themselves to justify an unfavorable prognosis; but in cases where you have been dreading deep-seated organic trouble, whether febrile or not, and you find aphthæ beginning to form in the mouth, it is of most unfavorable omen. In addition to the elevation of temperature, there is excited action of the heart, and the friction-sounds at the base of the heart are more marked than they were yesterday.

I cannot divest myself of the idea that this is a renewal of the disease at the base of the heart. There is considerable heaving and throbbing of the root of the aorta, and there are marked friction-sounds, and there is pain and tenderness on pressure being made over the base of the heart. There is, in all probability, a renewal of the disease at this point, which I regard as probably rheumatic in type. There is no evidence that the pulmonary disease is progressing.

I shall order a blister, three inches square, to be placed over the base of the heart, and shall give him the salicylate of sodium, in eight-grain doses, every three hours; and, by the rectum, twelve grains of cinchonidia, morning and evening. The efficiency of the salicylate of sodium will be increased by the addition of two drops of tincture of aconite to each dose.

TRANSLATIONS.

Treatment of Phthisis with Acetate of Lead.—Dr. Biedert, in the yearly report of the hospital at Hagenau, gives a number of cases of hæmoptysis which had been treated with acetate of lead. There were altogether ten cases, ranging in age from 15 to 46 years, suffering from severe and obstinate hemorrhages. The causes were phthisis in seven cases, chronic pneumonia in two, and acute pneumonia in one case. The drug, exhibited in doses of from 0.03 to 0.05 gramme every two or three hours, acted so promptly in arresting the hemorrhages that the author considers acetate of lead as the strongest and most satisfactory hæmostatic known. In seven of these cases the other usual remedies, such as ice, acids, alum, with narcotics and ergotin injections, had been used without result, and the hemorrhages had continued for considerable time before the acetate of lead was used. In three others the drug was given at once, and in all the cases the hemorrhages ceased in from twelve to thirty-six hours from the beginning of the treatment.

If the cough should be severe, the author advises combining the acetate of lead with opiates, and to continue the exhibition of the acetate of lead in gradually-diminishing doses for several weeks after the hem-

orrhages have ceased. A severe lead colic was not observed in any of the cases, but should such be the case the lead should, of course, at once be withdrawn. A like prompt action was observed in a case of obstinate renal hemorrhage in a child suffering from acute nephritis.

[This experience of the above observer is, however, not borne out in this country, since even larger doses of acetate of lead than those he mentions have failed to give as good results in checking hemorrhage as the usual combination of ergotin and opium. s.]

Non-Parasitic Chyluria and Chylous Hydrocele.—M. Le Dentu, at the Société de Chirurgie, recently read a paper on the filaria sanguinis hominis and the pathogenic *rôle* of this parasite in fatty hydrocele, in which, after reviewing the history of the discovery and defining its limits, he refers to another class of cases in which no parasite exists. He concludes as follows:

1. If it is demonstrated that parasitism is the real cause of a certain number of chylous effusions and of chyluria, without prejudice as far as other lesions are concerned, it appears certain that the parasitic theory is not applicable to all cases.

2. To this special cause should be added others, of which some are due to a general cause (peculiar alterations of the blood), some purely local in their origin (ruptures or compressions upon any point whatever of the lymphatic system).

3. Such compressions, whether affecting the thoracic duct or the principal lymphatic trunks, act as partial or total obstructions to the ganglia, and produce either a transudation or rupture, and, unless absorbed, an accumulation of lymph either in the tissues or in closed cavities.

4. It is by obstruction of the ganglia, of the trunks and their branches, that the filaria causes all the disorders attributed to it. Treatment of the parasitic form is therefore rendered unsatisfactory by the nature of the case.

Precautions to be Adopted in the Treatment of Phthisis.—At the International Congress of Hygiene held at La Haye in September last, the following conclusions were adopted regarding the treatment of phthisical patients, after an interesting discussion upon a report presented by Prof. Sormani, of Pavia.

"It is demonstrated that pulmonary phthisis can be, in certain cases, transmitted from the sick to individuals in health. Although the chances of this transmission are limited, prudence requires certain precautions.

"1. No one should be allowed to share the sleeping-chamber or the bed of a tubercular patient in an advanced stage of the disease. The apartment of a phthisical individual should be constantly aired and ventilated.

"2. The danger resides especially in the sputa, which should not be allowed to go on the floor or on clothing, where they may dry and become converted into dust.

"3. The sleeping-rooms, the bed-linen, and clothing which have been used by consumptives should always be disinfected. Steam (at 100° C.) and washing in boiling water are the best means of disinfection.

"4. Convalescents from chest-disorders and feeble and exhausted patients should especially avoid prolonged contact with the tuberculous."—*Revue de Thérapeutique Med.-Chir.*, No. 23.

Herpes Zoster and Facial Paralysis.—Dr. E. Voigt, in the *St. Petersburg Med. Wochenschrift*, relates at length an interesting case of acute herpes zoster (occipito-collosis) complicated with grave peripheral unilateral facial paralysis, and comes to the conclusion that herpes zoster is not necessarily dependent upon disease of the spinal ganglia, but, as in this case, may be caused by local neurosis of the sensory nerve-fibres. The case was treated by galvanism, with very good results as far as the pain and tinnitus aurium were concerned, but the facial paralysis was but little benefited. s.

Homatropin and Glaucoma.—In the *Centralblatt für Praktische Augenheilkunde*, September, 1884, is reported a case of incipient glaucoma produced by homatropin, occurring in the practice of Dr. Theodor Sachs, of Innspruck, in which eserine speedily brought about a return to the normal condition. This case is interesting from the fact that it seems to be the first one on record in which homatropin has produced glaucoma, and also on account of the prompt antidotal action of the eserine. s.

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EDITORIAL.

1884—1885.

WHILE the annals of medical science during the last twelvemonth were not distinguished by any especially brilliant achievement or epoch-making discovery, yet it may be truly said that satisfactory and solid progress in rational medicine, conservative surgery, and the applications of sanitary science has undoubtedly been made by the profession as a whole. Within the limits of a brief article we cannot hope to do justice to the topic, but it may be interesting, as it certainly is timely, to cast a cursory glance over some of the prominent features characterizing the *annus medicus* through which we have just passed.

In the first place, upon calling the roll we miss many representative members of the American medical profession who responded *Adsum!* at the beginning of last year,—Samuel D. Gross, Willard Parker, J. Marion Sims, L. A. Dugas, S. M. Bemiss, J. G. Thomas, Lunsford P. Yandell, J. J. Woodward, Robert E. Rogers, Joel Foster, William Darling, Edward Jarvis; and, in Europe, Prof. Cohnheim, Reichert, von Zeissl, Balfour, Allen Thomson, Dumas, Wurtz, Tweedie, Radcliffe, Jäger, Sir Erasmus Wilson, Charles Clay, Frederic A. Mahomed. How the sad list extends! Death, who loves a shining mark, crowns the memories of 1884 with the myrtle rather than the laurel.

Turning to affairs of public health, we observe the increased interest in the meetings of the American Public Health Association, and as an indication of advance in such matters we may cite the formation of an American Society of Public Analysts during the past year. The existence of cholera in epidemic form in Italy, Spain, and France, and the prospect of an early outbreak in this country, have stimulated health-boards to increased activity, and suddenly inspired health-officers to new zeal in their work. The public interest in the subject finds expression in a bill now before Congress to re-establish a National Health Board, which has a fair prospect of passing, as it has been reported upon favorably in committee.

In surgery, the advance in knowledge of the results by operative interference in intra-peritoneal disorders has been decided. The carbolic spray is now rarely used, surgeons having learned that the peritoneum is far less vulnerable than was supposed, cleanliness, operative skill, and care in the after-treatment being the essentials. In this connection we must notice the operation recently performed by Dr. Sutton, of laparotomy and resection of the bowel for artificial anus, said to be the first operation of this kind performed in America. Cerebral surgery has also had a triumph in the localization by Dr. Hughes Bennett of a cerebral neoplasm under the dura mater, and its successful removal by Dr. Godlee in London. A passing reference only can be made to naso-pharyngeal surgery, but we cannot refrain from calling attention to the successful treatment of hay-fever by the removal of nasal hypertrophies, for which we are indebted particularly to Dr. J. O. Roe, of Rochester, and J. N. Mackenzie, of Baltimore.

The problem of the successful application of the electric light in a practicable form for diagnostic purposes seems to have been satisfactorily solved during the past year by the lamp of the S. S. White Manufacturing Company, which promises soon to be a part of the necessary armamentarium of the physician, as the companion to the speculum and laryngeal mirror.

In matters more directly medical there

is less to report. It can scarcely be said that the germ-theory has advanced greatly during the year. It is true that many new "germs" have been discovered, and attempts made to enlarge the list of zymotic disorders by the addition of many diseases, including eclampsia and alcoholism, but there has not yet been furnished the demonstration that microbes are the direct and sole causes of specific diseases. Nor can it be claimed that the recognition of these organisms—as, for instance, the bacillus of tuberculosis—has greatly aided our therapeutics: it might indeed be said that such therapeutic deductions as have been made from the germ-theory of disease have, in the main, failed to be endorsed by clinical experience. There has been a quiet but steady advance in general pathology during the year, which is probably most evident in diseases of the nervous system. A better prognosis is held for locomotor ataxia, and brain-lesions are more readily recognized and are treated with better chances of success than they were a year ago. Among the therapeutical advances we must include Da Costa's abortive treatment of erysipelas with hypodermic injections of pilocarpine, which has yielded striking results in his hands and promises to be a decided acquisition to practical medicine. The great event of the year was beyond doubt the introduction of the hydrochloride of cocaine into ophthalmic surgery by Koller, of Vienna, and its extension to other uses by a host of clinical observers who are enthusiastic in its praises. We might also speak of the introduction of antipyrin as a substitute for kairin as an antipyretic, but, as it is a preparation which has been kept secret, we think it advisable that the profession should exercise some caution in using it and in recommending its use. Etherization by the rectum had a very brief existence, and has now, we think deservedly, fallen into disrepute.

Among the most inviting problems for the pathologist during the coming year are the etiology of cancer and the unification of the different and conflicting views of tubercle, while the rational treatment of pulmonary consumption and cholera will continue prominently to engage the attention of the clinical investigator.

In beginning the new year, it is a subject of sincere congratulation to the profession throughout the entire country that the Code controversy has ceased to disturb the harmony of the New York medical societies, which now are free to continue their scientific work unhindered by ill-advised and ill-timed attempts to elevate the medical profession.

THE ABUSE OF ANTIPYRETICS.

BY physicians of sufficiently broad views to recognize "not only the disease in the sick man, but the sick man in the disease," the growing practice, which prevails more particularly in Germany, of administering enormous doses of antipyretics, is viewed with feelings of distrust, not unmingled with alarm. In a discussion at the French Academy, Professor Peter charged the advocates of the antiseptic or germicide treatment to be careful "lest in lifting a club to kill the germs they knock down the patient." Surely this warning was not given without sufficient cause. From the study of thermic fever, and of the effects of high bodily temperature upon animals, knowledge of unquestioned value has been derived, but from a hasty application of this knowledge to clinical medicine there has resulted an evident tendency to look upon fever as simply an excess of bodily heat, the object of treatment being mainly to restore the temperature to the normal; hence remedies capable of acting powerfully upon the nervous system, depressing calorification and assimilation, are largely used. That this view is so generally held is due largely

to the adoption of the views of Liebermeister.

Granted that hyperpyrexia adds an element of danger to the case, which sometimes makes it essential that the overheated blood and tissues should be relieved as rapidly as practicable, it does not follow that ordinary cases of fever require or will be benefited by toxic doses of quinine, salicin, salicylic acid, kairin, antipyrin, etc., which have been so highly vaunted. Professor Da Costa, in discussing the general management of fevers,* calls attention to the fact that it must not be inferred that massive doses of sulphate of quinia are to be employed in all the fevers of the continued type, and says that "such large doses cannot be given with impunity in various and dissimilar conditions; and it is very possible that while they reduce the temperature they may aggravate the disease or some of the lesions."

In a discussion upon this subject at the last meeting of the British Medical Association, Professor Gairdner† expressed a similar opinion, and, while not opposing the careful and judicious use of antipyretics, or of any other remedies, "he could by no means admit that the one object of treatment in an acute disease was to keep down the temperature by hook or by crook. It was impossible to regard the human body, in an acute disease, as a mere mass of overheated tissues, or to suppose that by merely cooling it down outside one could restore health and function when otherwise fatally disabled. When it was said that one must absolutely cool down the patient till it became necessary to give him stimulants to set him up again, he thought that the limits of safety in antipyretic practice had probably been exceeded. When it was said that, failing the cold bath, it was necessary to give enormous and repeated doses of quinine, and, failing these, enormous and certainly dangerous doses of digitalis, aconite, and even veratria, with the single object of getting down and keeping down the temperature, in diseases certainly admitting of fairly successful treatment without nearly so much interference, he confessed that he thought that the practice of medicine was running in a wrong direction, that they were likely to have the story of the past repeated once more,—a time of energetic and active practice (so called),—that is, of extremely powerful, and in some cases dangerous and even poisonous, remedies, so advocated as to make them appear indispensable, and to place them as such in the hands of every one all over the country." Feeling that such a custom was likely to run into abuse, Professor Gairdner entered a vigorous and timely protest against it, which may well be heeded by practitioners in this country.

It is noteworthy that at the last meeting of the Society of Physicians in Vienna Professor Nothnagel likewise called attention to the prevailing error of regarding fever as a disease *per se*, which is to be treated by any and every means that may influence it. He offers the pertinent suggestion that fever may often be a salutary process, and, in fact, is one of nature's regulative means. It is not evident that acute febrile diseases are shortened by simply diminishing bodily temperature, and therefore the routine or indiscriminate administration of antipyretics, based upon the single symptom of elevation of temperature, is unscientific and unsafe.

The Executive Committee of the American Public Health Association met in Washington, December 11, 1884, to make arrangements for the meeting in December. Subjects were selected for prize essays, and the Committee on Disinfectants was authorized to publish a preliminary report in view of the possible advent of cholera.

* Introductory chapter to Dr. J. C. Wilson's Treatise on the Continued Fevers. New York, 1881.

† British Medical Journal, p. 1124.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE medical world here has recently been saddened by the death of one of our most promising young physicians,—Frederic Akbar Mahomed, of Guy's Hospital. Though only thirty-six years of age at his untimely death, Dr. Mahomed had for a number of years been a conspicuous figure in our ranks. Even as a student he won regard, no less from his general assiduity than by his work with the sphygmograph, then beginning to attract attention. He had not long been qualified when he was appointed resident medical officer to the London Fever Hospital. Here he worked hard at the matter of arterial tension, having the advantage of the supervision of Dr. Broadbent, Visiting Physician to the Hospital. To speak broadly, Dr. Mahomed found a rise of arterial tension to precede uræmia, especially in the kidney-complications of scarlet fever. Consequently he reasoned that if a brisk purgative were given to remedy the waste-laden condition of the blood, distinct uræmic symptoms might be averted. And practice proved the assumption to be correct. Since then, Dr. Mahomed's name has been closely linked with the subject of arterial tension, and much of our present knowledge of the significance of conditions of high tension is owing to his exertions. When he left the Fever Hospital he became Medical Tutor at St. Mary's Hospital, and after that Pathologist to the School. Here a sad incident occurred. He had to make an examination of a patient who had died of scarlet fever, and the result was that he took the infection home, where his wife lay just confined. She caught it and died, leaving him with two small children. Such a blow would have damped the energies of an ordinary man, but Dr. Mahomed never flinched from his duties, and worked indefatigably at his post. Soon an opportunity offered itself for his rejoining his old school,—Guy's. While Medical Registrar there, he saw it would further his end of gaining a place on the staff of that hospital to possess the M.B. of Cambridge. He had already supplemented his qualifications to practise by taking the M.D. of Brussels. He acted with his wonted energy. In order to qualify for his degree, he must reside so many terms at Cambridge. So Dr. Mahomed "went into residence" by taking his rooms and sleeping each night at Cambridge, while he continued his duties in the day as a Registrar at Guy's and an Assistant Physician at the Fever Hospital. And all this time he was earning his bread and maintaining his two little ones by teaching and writing. Such labors would have crushed most men; but Dr. Mahomed through it all presented the same erect carriage, the same elastic spirits, the same cheery demeanor, the same readiness to enter into any medical topic which might be exciting attention. And during all this time he was making valuable additions to our literature, his essay on "The Pre-Albuminuric Stage of Bright's Disease" having an especial interest at the present time, when our views on albuminuria are in a state of change. Dr. Mahomed attained his aim of becoming attached to the school of Guy's Hospital, where his diligence and his enthusiasm communicated itself to others. His teaching was sound and practical, while his belief in the efficacy of remedial agents was of the greatest service in a school where therapeutics were too little esteemed. Students found they could learn much from him, and Dr. Mahomed ever held his stores of knowledge at the disposal of his pupils. Liked, esteemed, looked up to as one who would occupy a commanding position, he was doing good work in his time and generation in his hospital and its school, and was also Physician to the Fever Hospital. Surely all this was work enough for one man. But Dr. Mahomed found time to be the moving spirit of the "Collective Investigation" movement of the British Medical Association, and was one of the Secretaries. The aim of the movement was to utilize the vast body of the Association by eliciting the opinions of its members on certain subjects, circulars being issued and widely circulated. The movement is thus far yet in its infancy, too much so to permit any positive opinion being formed of its usefulness or its comparative inutility, about which opinions differ widely. That something would have come of it if the man who more than any other was responsible for the movement had only lived to nurse his bantling is certain enough; but what may be its fate now is uncertain. In furtherance of his object, Dr. Mahomed went to the recent international meeting at Copenhagen, and set on foot an International Collective Investigation Committee. Shortly after this he took ill of enteric fever, how caught no one can say, and the attack was a severe one. Hemorrhages occurred and recurred, with the untoward result that the strong, courageous man lay still in death. The announcement of his death took many by surprise, for a man may be sick unto death in this large city, and few even of those who entertain warm friendly feelings for him know aught of it until there comes the startling rumor of his impending death, or more often the staggering announcement of his death in the obituary columns of our newspapers. The event is all the sadder that, with his wonted sanguine temperament, Dr. Mahomed had just moved into a large house, suitable to his position and prospects, in Manchester Square. Few men so young have been so universally regretted.

Not long ago, Dr. Broadbent was speaking of him as a remarkable man, not only for work in himself, but for his singular power of inspiring work in others. Prof. Humphry, of Cambridge, has borne his testimony in the *British Medical Journal* to the invaluable work he has done in the Collective Investigation movement. And, last week, one of those who were hostile critics of the movement steps forward at once to honor the man who set it on foot, and gives it as his opinion that the present is an opportunity for making a start in a new direction,—viz., out of the large and fast accumulating funds of the British Medical Association to grant to Dr. Mahomed's widow (he had married a second time) and children a yearly sum. The suggestion ought to meet with wide-spread adoption by the Association, for Dr. Mahomed had peculiar claims upon the Association, and every one who has its success at heart and would be glad to see it flourish in every way will be glad to see the suggestion carried out. Certainly, if ever its funds are to be utilized to grant pensions to the widows and children of those who have died in its service and wearing its harness, the present is a case in point. And, fortunately, Dr. Mahomed, with all his energies, made many friends and but few, if any, enemies, being singularly happy in the last in this jealous world.

Personally, I think some such recognition of what Dr. Mahomed did for the profession in general and the Association in particular is eminently desirable, and its rulers would do a graceful act if they granted a yearly sum to those who depended for their all upon a zealous worker well known to them.

Dr. Mahomed was a man of stalwart frame, tall and commanding in appearance, full of energy, who made his presence felt in any company. Those who were present at the Worcester meeting of the British Medical Association will not readily forget him when the meeting to discuss the compulsory notification of disease was falling into confusion and losing its way in propositions and counter-propositions. Dr. Mahomed, with his towering presence, his loud, ringing tones, and clear exposition, put all on the right track, and enabled the meeting to speak its mind and express its views, when, without him, in all probability, the meeting would have ended in "confusion worse confounded."

And now something may be said as to the practical aspects of one item of the life-work of this ardent student. His work with the sphygmograph led him to apply the instrument to the pulse in post-scarlatinal conditions, with the result that he discovered a rise in the arterial tension to precede the oncome of uræmic convulsions. This rise he attributed to the presence of excrementitious nitrogenized materials in the blood, not being efficiently cast out by the kidneys and accumulating in the blood. The well-known high arterial tension, the sustained pulse (full between the beats), with its characteristic square-headed tracing, of gouty conditions stood in a most suggestive relation to this pre-uræmic rise of tension in post-scarlatinal states. When uræmic symptoms are developed, it is the practice to act freely on the bowels, or nature spontaneously sets up diarrhœa, by which the defective action of the kidneys is vicariously supplemented and the uræmic condition relieved. The natural inference was that if such vicarious action were set up before the oncome of the uræmic state, it might be avoided, and such was the result in a sufficient number of cases to justify and corroborate the view. But behind the direct result of his acumen lay indirect results which did not escape Dr. Mahomed's vision. He made a study of Bright's disease, the correlative of the nephritic state left by scarlatina. Here also there is imperfect secretion of nitrogenized waste, accumulation of it in the blood, and sundry consequences of this, as serous inflammations and serous effusion into the brain. Excision of the kidneys of serpents is followed by a deposit of urates in the serous membranes, and in mammals extensive disease of the kidneys is commonly followed by morbid changes in the serous membranes. The rise in arterial tension in such cases is found to lead in time to hypertrophy of the left ventricle and accentuation of the aortic second sound. Not only are the semilunar valves closed violently, but on the arterial recoil the whole of the aortic root is violently distended, with the result very frequently of valvulitis being set up, followed by regurgitation through the injured valves. The distention of the arterial system leads to the development of atheroma throughout the arterial walls, and these hardened, brittle walls are liable to be cracked, with the formation of an aneurism, or maybe, if the rupture take place in the cerebral vessels, a blood-clot is formed, constituting apoplexy, or a stroke. Such association was observed as a matter of fact in the pathological room by Rokitansky long before the cause of the association, or *zusammenhang*, had been investigated. Then to these are added times when the accumulation of the azotized waste in the blood leads to acute uræmic evidences, or at other times to paroxysms of angina pectoris vaso-motoria. Angina is now known to be linked with vaso-motor disturbance; there is contraction of the arterioles, a damming of blood in the larger arteries, distention of the aorta, and, behind that, distention of the left ventricle. Sometimes the condition becomes so pronounced that the ventricle comes to a stand-still in diastole, unable to contract upon its contents, exhausted in its effort to overcome the resistance offered to the onward flow of the blood by the full state of the aorta. All these morbid states are the outcome of a waste-laden condition of blood.

Now, how is this primary condition to be met? Experience has told of the utility of cathartics. The rule of the older men, when they experienced a tight artery, was to bleed, if the condition was serious, and so to reduce the bulk of the blood, getting rid of so much waste matter with it. In less grave states the practice was to administer a blue pill and a black draught, and so "sweep out the liver," as they termed it. And very good practice this was in a great variety of obscure conditions, as John Abernethy found. It was not the use of such treatment which led to its abandonment; it was the abuse of it. When Abernethy encountered certain conditions of a somewhat confusing character, he recognized that a morbid state connected with the liver underlay them, and by the administration of a mercurial followed by a purgative distinct amendment was the result. Very commonly, dark, offensive motions, copious in bulk, were voided, and "inspissated bile" was a term then in common use. Such was Abernethy's practice, and his results, when published, led many others to follow his example. Ere long the blue pill and black draught were the fashion, and were resorted to in season and, what was worse, out of it. The wide-spread resort to such powerful medicaments led to much undesirable result. Doctors employed the heroic measure in unsuitable cases. Persons who suffered from "Liver" resorted to it habitually, and made it the excuse for a dietary far beyond their actual requirements, flying to the blue pill and black draught when "out of sorts," until a reaction set in and Abernethy's line of practice fell into disrepute. But, all the same, the pendulum is swinging back again; and now some of us at least know by experience the excellent effects of a mercurial followed by a purgative whenever the blood is surcharged with nitrogenized waste. And for this we do what the older men did,—viz., "feel the patient's pulse" first, and, finding it tense, take our measures accordingly.

Now, what Dr. Mahomed did was to give scientific precision to such observations. The sphygmograph writes down legibly and records what the trained finger feels, and so can convey a visible impression to others,—a matter of the highest value in teaching. When the student saw the sphygmograph-tracing before the eliminant treatment and after, he had a tangible proof of cause and effect. This is to him much clearer and more distinct than a careful interrogation of the patient's subjective sensations (a matter rather at a discount in medical teaching at the present day), and the tracing of high tension contrasted with the more normal tracing given by the artery after the blood had been cleansed.

Such, then, is a wider outcome of the research with which Dr. Mahomed's name will remain indissolubly connected. Of course he was not alone in the field, but his work stood on such a solid basis of individuality, and his observations were conducted on such a clear, unmistakable line, that his position was at once prominent and permanent. His loss to Guy's Hospital is great. It is not that Guy's has not on the list of its staff some admittedly able men; but it lacks that galaxy of talent which once shone over it and constituted it the finest school of medicine in England, certainly. Guy's has known evil times. The distinguished men who once gave it such prominence have passed away, and were not replaced,—from no fault of any one's, for Guy's never followed the rule which has worked so disastrously at some schools, of sending away its talent and then starving for want of it. Then it has suffered from civil strife, and been made the battle-ground of a fierce contest betwixt an arrogant sisterhood and the medical staff. It has its funds crippled by agricultural depression and political agitation in Ireland, where much of its property is located. Yet, with all this, it held its ground as the school whither the well-to-do general practitioner sent his son, if the youth hankered after his father's profession. But it has just lost Hilton Fagge, a man of weight on the teaching staff; and now a greater calamity has befallen it in the death of a man who not only held a conspicuous position in the great Borough school, but who had at an early age drawn the gaze of the medical world upon him by his actual achievements and the promise which lay in him. His profession regrets the loss it has suffered, and, beyond this general regret, there is that of those who enjoyed his personal friendship and who knew the sterling worth of the man. A movement is already on foot to secure some lasting memorial of him.

J. Milner Fothergill.

PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held December 24, 1884, John A. Wyeth, M.D., Chairman *pro tem.*

Dr. R. Van Santvoord presented specimens removed from three different patients. The first illustrated

DIPHTHERITIC CROUP.

The child from whom it had been obtained was 13 months old, an inmate of the Randall's Island Hospital. It had been suffering for about a month with diarrhœa, and was said to have had bronchitis. The house physician's attention had not been specially directed to the lungs until last night, when the nurse said the child had been ailing more than usual for some hours, and was in a somewhat stupid condition. The physician

found the patient breathing with difficulty, and examination of the throat revealed a patch on the right tonsil. Death occurred, as nearly as could be estimated, within twenty-four hours of the inception of the throat-trouble.

At the autopsy, membrane was found upon the right tonsil, epiglottis, larynx, and half-way down the trachea. The membrane was loose in the trachea. The trachea and bronchi were injected, and were coated with a copious secretion of muco-pus. About one-third of both lower lobes and about one-half of both upper lobes of the lungs were hepatized from catarrhal pneumonia. The solitary follicles in the intestines were enlarged.

PERICARDITIS, PLEURISY, PNEUMONIA.

The second case was that of a man who had entered the surgical wards of the hospital with varicose veins of the leg. About two weeks before his death he complained of pain over the pericardium, and shortness of breath, and afterwards manifested a certain amount of cyanosis. When Dr. Van Santvoord saw the patient, the heart was beating rapidly and forcibly, the apex-beat was in the nipple-line, but there were no auscultatory deviations, except that subcrepitant râles were heard over the lower lobes of both lungs behind. The patient was slightly cyanotic. Within forty-eight hours bronchial breathing was heard over the left lower lobe. Dr. Maxwell examined the heart several times, and found nothing abnormal other than that the area of dulness extended beyond the impulse of the apex, which was in the nipple-line. There were fine râles over the greater portion of the chest most of the time during the two weeks preceding death.

At the autopsy, the arachnoid membrane showed opacity; there was a certain amount of œdema of the membranes and excess of fluid in the cerebral cavities. More than a pint of fluid was found in the left pleura. The lower lobe of the left lung was compressed, the upper in a condition of gray hepatization, commencing to resolve, the entire lobe œdematous; the right upper lobe was in a condition of red hepatization, and the middle and lower portions in a less advanced stage of inflammation. The pericardium contained blood-stained fluid and had a coating of lymph. There was slight fatty degeneration of the cardiac walls; the left ventricular opening admitted three fingers, the right four. The spleen was shrunken; the kidneys showed a moderate amount of interstitial nephritis.

The case was chiefly interesting as illustrating how easily marked lesions might be overlooked by so competent a diagnostician as Dr. Maxwell.

BRONCHO-PNEUMONIA WITH PLEURISY.

The third specimen was removed from a child about a year old, in whose case no diagnosis had been made by the physician. It illustrated broncho-pneumonia and pleurisy of the right side.

PROLAPSUS OF THE RECTUM.

The fourth specimen was removed from the body of a child which died, aged 19 months, from broncho-pneumonia. The specimen showed prolapsus of the rectum, the peritoneum having also been dragged down to a very considerable extent with the gut. There had been diarrhœa.

Dr. J. C. Ripley asked Dr. Van Santvoord if he would relate to the Society what he had previously stated to him in connection with the first specimen.

Dr. Van Santvoord referred to a paper read at a recent meeting of the Academy of Medicine, in which the author, Dr. Winters, took the ground that laryngeal obstruction produced congestion of the lungs, with subsequent pneumonia. Dr. Ripley, on the other hand, claimed that when entrance of air into the lungs was partially obstructed in any portion of the tubular system of the air-passages, instead of having congestion we would have emphysema and consequent anæmia. Dr. Ripley's view was, the speaker said, the one which was accepted by pathologists generally. Dr. Van Santvoord thought that all who had examined the bodies of many children dead from obstruction to the air-passages must have found that emphysema was the usual condition present, and that broncho-pneumonia was exceptional. Consequently the idea of preventing the occurrence of broncho-pneumonia was not an indication for tracheotomy in laryngeal stenosis. He thought this fact was illustrated by the specimen presented, and said the condition of broncho-pneumonia which was present was antecedent to diphtheria.

Dr. Ripley did not wish to enter upon the discussion of this subject again at present, but would say that he had recently examined the lungs of a child which had died from croup after tracheotomy, and there was not the slightest indication of pneumonia; the lungs were anæmic and bulged out when the chest was opened.

TRACHEOTOMY FOR DIPHTHERITIC CROUP.

Dr. Chapin presented the trachea and lungs of a child, aged 3 years, and gave the following history. It had been ailing with a bronchitis for eight or ten days, when a diphtheritic membrane developed over both tonsils back of the soft palate, apparently extending up into the posterior nares. There was some hoarseness pertaining to the cough, and general bronchitis. Within forty-eight hours dyspnœa developed to an extent that caused considerable recession of the supra- and infra-clavicular and the supra-sternal regions. Within twenty-four hours more it was necessary to perform tracheotomy,—an operation which Dr. Chapin found far from being so

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simple and easy to perform as some had recently claimed. Within three-quarters of an hour after the operation the temperature and pulse became considerably more elevated, but subsided again later. A large cast of the trachea was expelled, and the breathing became easy. The next morning the breathing again began to grow difficult, and in the afternoon was as labored as before tracheotomy had been performed. The tube, however, was perfectly clear, and it was evident that the stenosis was lower down in the respiratory tract. At about five o'clock, being called in great haste, as the child was apparently dying, he threw tripsin into the tube by means of the spray, and some pultaceous membrane was expelled, followed by easier respiration. After an hour the breathing was perfectly easy, and, the spray being kept up during the night, the child continued to breathe easily until death took place, the next morning, from blood-poisoning.

At the autopsy very thick membrane existed down to the tracheal wound. Below that point there were bits of membrane which evidently had been partially digested by the pancreatic extract; they extended down to the second division of the bronchial tubes. There were two spots of pneumonia at the bottom of the lower lobe of the right lung.

Dr. J. Lewis Smith remarked that in six or eight cases he had used extractum pancreatis mixed with the bicarbonate of sodium as an application to the faucial pseudo-membrane, and certainly in these cases the diphtheritic membrane had disappeared in a much shorter time than it had ordinarily in his practice. The question had once been raised as to whether we should not abstain from doing tracheotomy in cases apparently hopeless, as popular prejudice against the operation would be increased should the patient die. Dr. Smith would not hesitate to operate even if there were only a probability of relieving the child but for a short time.

Dr. Wyeth said, with regard to tracheotomy being a very simple operation, that the last time he performed it, which was for a foreign body in the air-passages, it proved very difficult. In that instance the trachea was not in the median line.

Dr. Ripley remarked that local applications in his experience seemed to have been failures. He once, however, poured lime-water into the tracheal wound by the teaspoonful, and the result was like that after the use of tripsin in Dr. Chapin's case: the membrane was dissolved, but the child died of diphtheria of the wound. With regard to the temperature running up after tracheotomy, that had also occurred in his practice, but, as a rule, unless the disease progressed, the temperature would fall the next day. Dr. Ripley further said that he thought the apprehension of harm coming from some fluid entering the trachea was unfounded. A teaspoonful of fluid entering the trachea would not reach the air-cells, and if it should, it would do no harm.

Dr. W. P. Northrup said that after the discussion on Dr. Winters's paper at the New York Academy of Medicine, he looked over the records at the New York Foundling Asylum, and found there had been autopsies in sixteen cases of diphtheria with marked laryngeal symptoms. In all these cases the membrane extended down to the finer bronchi, and in one case it extended to within a centimetre of the base of the lung. In reply to a question, Dr. Northrup said he believed there was pretty well marked pneumonia in at least four of the sixteen cases; also that tracheotomy was performed in about four of the cases; but Dr. Dwyre was in the habit of relieving the dyspnœa by a tube inserted between the vocal cords, so that in about twelve of the cases the laryngeal stenosis was entirely relieved.

Dr. A. Jacobi called attention to the fact that the pseudo-membrane in the bronchi and trachea was more likely to macerate than in any other locality. For this reason he believed there were many reports of success following the use of lime-water, alkaline waters, extractum pancreatis, etc. He further said children died from stenosis sometimes after tracheotomy, but not as frequently as when the operation was not performed. The stenosis, moreover, was of a different kind from laryngeal stenosis. It was true there was recession of the supra- and infra-clavicular and of the diaphragmatic regions, but not to the same degree as in laryngeal stenosis. Again, in laryngeal stenosis the respiration was long-drawn and slow, whereas in stenosis due to descent of the croupous membrane the respiration was shorter, more frequent, and resembling more the respirations in pneumonia and bronchitis. In a case presenting the latter form of respiration, the condition should not be regarded as one of pure and uncomplicated croup, but as one of croup with a mixture of inflammatory element, which was liable to cause death from pulmonary congestion, bronchitis, œdema, etc. This was a useful point in diagnosis and prognosis.

Dr. Ripley asked Dr. Jacobi if he wished to give the impression that in laryngeal stenosis the respirations were slow.

Dr. Jacobi said yes.

Dr. Ripley said he had records of a hundred cases in which the number of respirations per minute were noted, and they were invariably hurried. That was not only true in croup, but it was also true in asthma. The respirations, it was true, were a little different after tracheotomy had been performed and where there was secondary croup, but he thought it was not due to any inflammatory process, but in part to the obstruction being distributed more generally over the lungs,

and more particularly to the fact that the child by this time had become exhausted, the respirations were more shallow, and the dyspnœa was not so noticeable.

Dr. JACOBI thought the statement which he had made, based on observation of several hundred cases of croup, was also supported by theory. For example, a bottle capable of holding a certain amount of liquid would require a longer time to fill if the mouth were obstructed than if it were large and fully open. In laryngeal stenosis there would be no advantage for the child to voluntarily shut off one inspiration when the lungs were only partially filled with air and gasp for more breath. The obstruction to the ingress of the air would necessarily give rise to a longer inspiration to distend the lungs.

DIFFERENTIAL DIAGNOSIS BETWEEN PLEURISY WITH EFFUSION AND PNEUMONIC CONSOLIDATION IN CHILDREN.

Dr. J. LEWIS SMITH related the following history of a case, of which Dr. Northrup gave the result of the post-mortem examination. The child was 11 months old, and for two months had had pertussis, and for ten days preceding the 24th of the month, when he first saw the patient, had been suffering from increased bronchitis. In addition to this, Dr. Smith found, on the 24th, flat percussion-sound on the right side of the chest, except anteriorly, where dulness was not so great. His diagnosis was pleurisy, but, as the house-physician was unable to withdraw any fluid with the aspirator-needle, it seemed necessary to regard the case as one of the many in which it was difficult to differentiate between pleurisy and pneumonia in children. The physical signs, or signs obtained by auscultation and inspection, were often so nearly alike in pneumonia and pleurisy with effusion in children under fifteen months of age, that it was impossible to make a positive diagnosis. In the present instance there was no enlargement of the right side of the chest, nor bulging in the intercostal spaces. He noticed at one point on the right side a little vocal fremitus. The respiration was hurried, the pulse 180 to 190, the temperature 103.5°.

Dr. NORTHRUP said that at the autopsy he found the right lung much more than usually compressed and pushed forward. In the cavity of the pleura was a pint of greenish-yellow fluid, containing pus. Dr. Northrup said he supposed there was a record of seventy-five to a hundred cases of post-mortem examinations in the orphan asylum in which there had been an error of diagnosis between pneumonia and pleurisy in children.

Dr. JOHN A. WYETH presented four specimens illustrating surgery of the jaw.

SARCOMA OF THE INFERIOR MAXILLA.

The first specimen was of interest from a pathological point of view, being a portion of the lower jaw removed for sarcoma in a child 8 years of age. The portion removed extended from the second incisor to the last molar.

The second specimen illustrated the fact that operations performed early for ostitis of the lower jaw were less simple than if done later, after separation of the sequestrum. The third specimen had a history similar to the second, being likewise removed from the left lower jaw, the seat of necrosis.

The fourth specimen consisted of a portion of the left lower maxilla and dental nerve, which had been removed from a patient who had suffered for eleven years from tic douloureux of a severe type. After cutting down upon the nerve, he removed three-quarters of an inch of it and stretched the central portion. The patient had had no pain since the operation.

Dr. WYETH, in reply to a question by Dr. Jacobi, said the sarcoma in the first case had been developing, as he was told, for six or eight weeks.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, September 11, 1884.

The President, JAMES TYSON, M.D., in the chair.

DR. J. M. BARTON presented a specimen of *cystic papillary adenoma of the neck*, which he had removed from a patient at his clinic at Jefferson Medical College on September 6. The patient was a married woman, 31 years of age, the mother of three children. The tumor was of slow growth, having existed for five years, and having increased but little in the last two years. It gave no pain and but little deformity. It was about the size of a walnut, and lay beneath the clavicular extremity of the left sterno-cleido-mastoid muscle, in close proximity to both the subclavian and carotid arteries, from which it received a decided pulsation; on strongly pressing the tumor upwards and outwards, the pulsation ceased. The tumor was closely adherent to a number of large veins of new formation, which greatly increased the difficulties of its removal.

On section, it presents a number of alveoli, of variable diameter, communicating with each other and lined with a thick membrane, similar in appearance to the inner coats of the arteries. This membrane seems to have undergone calcareous degeneration in some portions. When the tumor was fresh, these cysts, on incision, were filled with a dark-red fluid like disintegrated blood.

Report of the Committee on Morbid Growths.—"A section made from the tumor of the neck presented by Dr. J. M. Barton shows a stroma of fibrous tissue, in which cavities are

seen, varying in size, lined with an epithelium having a cuboidal shape. From the margins of many of these cavities papillary ingrowths were noted, covered with cylindrical-shaped epithelium; other cavities are filled with the remains of cells or a structureless, colloid-like substance. The tumor may, therefore, be considered a cystic papillary adenoma, in which a colloid degeneration has occurred, or, from its location, it is not improbable that it may be either an outgrowth from, or a supernumerary, thyroid gland."

PHILADELPHIA NEUROLOGICAL SOCIETY.

THE regular stated meeting was held November 24, 1884, the President, Dr. S. WEIR MITCHELL, in the chair.

Dr. MITCHELL asked Dr. Woodnut, resident physician in the Philadelphia Orthopædic Hospital and Infirmary for Nervous Diseases, to read the notes of a case of erythromelalgia which had been under Dr. Mitchell's care in the hospital.

A CASE OF ERYTHROMELALGIA.

J. C. R., æt. 53, married, blacksmith, family history good. Mother died at 72; father still living. Six sisters still living and healthy; two died young. Has three children, all healthy. Has had scarlet fever, and at 20 variola, which left him slightly hard of hearing. Otherwise always perfectly well until September, 1881, when he first noticed pain on inner side of second toe of the left foot. One year after the third toe was affected, later the little, then the fourth, and about four months ago the great toe,—all on the same side. They were all affected in the same manner,—first a burning, then an aching, pain, and some weeks after there would be discoloration of more or less of the toe. Great toe has been least affected of left foot, only feeling sore at tarso-metatarsal joint.

One year ago the pain began in the right foot, first appearing, as in the left foot, in the second toe. Now it affects second, third, and fourth toes, but not so badly as in the other foot.

Pain is not noticeably worse in wet or cold weather. It is worse at night when the feet get warm. The last seven months, however, this was not so marked. Has occasionally had twitchings, chiefly at night, in calf of left leg and bottom of left foot. About six years ago the arms began to ache at night, and do occasionally yet. Pain is confined (to muscles apparently) just above the elbows. Arms are not quite so strong as formerly, but attributes it to want of use. Nine years ago ran a harrow-tooth in outer side of bottom of left foot. It healed without difficulty and left no apparent after-symptoms.

In January, 1883, had second toe of left foot amputated at proximal joint. It healed slowly, but relieved the pain not only in that toe, but also in the others.

The surgeon who removed the toe said that the amputated portion was "turned to gristle, and had no circulation."

Has no history of syphilis nor alcoholism.

At present all the toes affected are discolored. The left foot, up to the ankle, is covered irregularly with reddish patches, sometimes dark and sometimes brighter, disappearing on pressure, and more or less sensitive. Little discoloration on right foot except at corners of nails, and the disease has not developed so rapidly in the right as in the left foot.

Foot more or less swollen to the ankle. "Tendons seem sore." Occasionally pain in outer left ankle. Occasionally whole leg aches, but greater pain is on the spots of redness.

Pain, on walking, in the ankle and in the bottom of foot, so can only walk two or three blocks. Within the past few weeks a number of patches have appeared on the left leg, and one on the spine about the middle of dorsal region. For six or seven years has had occasional pains down the spine. It probably comes from a former sprain.

Also occasional sharp shooting pains at back of neck, on each side of spine, and down towards the shoulders, in the direction of brachial plexus. Not tender on pressure.

Sensation slightly diminished in the whole left limb, except on the patches of redness, where it is increased.

Elec. condition. No De R. Response equal in both legs to Galv. c. Far. c., slightly diminished action in left leg below knee. Sensation to both currents lessened in left limb. Measurement: r. calf, $13\frac{1}{8}$; l., $12\frac{1}{2}$; r. thigh, $20\frac{3}{4}$; l., $20\frac{1}{2}$.

Temp. R. $92\frac{3}{5}$, L. $93\frac{1}{5}$.

Dyn. R. 71, L. 70.

Appetite good, and, excepting pain, feels as well as ever. Urine, sp. g. 1.027; no albumen nor sugar.

His treatment has been absolute rest, massage, descending stabile galvanic current, and hot and cold applications to the spine once a day, chloride of gold and sodium. Fowler's solution and ergot have also been used.

11.21. An irregular-shaped patch appeared on dorsum of each wrist, preceded for forty-eight hours by pain and soreness; disappeared after being out thirty-six hours.

11.23. Redness appeared on each arm above elbow. Not preceded by pain, and appearing just after massage. Massage also brings it to view more plainly in the leg.

After the reading of the notes Dr. Mitchell brought the case before the Society.

Dr. CHARLES K. MILLS said he had seen quite a number of similar cases. His belief was that some at least of these cases were spinal in origin. The fact that some get well

is not against this theory. A few years ago he had attended a lady who had all the symptoms of diffused myelitis from unknown cause. He had also studied several cases of arsenical paralysis due to diffused myelitis. When the feet were pendent, in these cases, they would become hot, red in color, etc., like some of the cases of erythromelalgia. Dr. McBride, of New York, has described another type of cases, in which the limb is diminished in size, is cold, blue, etc.

Dr. MITCHELL said that he had no doubt that some of the cases of erythromelalgia were spinal in origin. He was not so certain, though, as to the spinal condition. In some of the cases an hysterical condition is present.

ON THE DIETETIC FACTOR IN THE TREATMENT OF ANGINA PECTORIS.* BY N. A. RANDOLPH, M.D.

There has recently been under my care a patient suffering from true angina, in whom, as is not seldom the case, any slight gastric irritation constituted the immediate exciting cause of the frequently-recurrent paroxysms.

After the last attack there existed an inability to retain the lightest and simplest foods, their ingestion inducing not only nausea, but much cardiac distress. Recourse was had, with advantage, to milk partially digested by the commercial Extractum Pancreatis, but the flavor of the resultant preparation was unappetizing, and finally became repulsive to the patient, who whimsically described its taste as that of "stewed corpse."

To meet this emergency there were devised two food-products, which I have not seen described, and which, in practice, proved eminently satisfactory.

I. *Pancreatized Oysters.*—The oysters of an ordinary stew (containing milk) are removed and finely minced, then returned to the liquid portion of the stew. The whole is brought to a temperature of 100° Fahr., the appropriate proportions of pancreatic extract and sodium bicarbonate are added, and the mixture maintained at the temperature mentioned for thirty minutes, with occasional stirring. It is then strained and served, and forms not only a highly nutritious and palatable soup, but one which is retained by very irritable stomachs, and utilized with a minimum of digestive power. After boiling, to prevent the further action of the digestive ferment, gelatin may be added, and the mixture served cold as a jelly. Cooked tomato, onion, celery, or other flavoring suited to the individual taste of the patient, may be added at the beginning of the artificial digestion, and the solid residue removed in the final process of straining, at which time it will be noticed that the minced oysters originally added have been in great part dissolved.

II. *Pancreatized Milk-Toast.*—Ordinary milk-toast, in which there is an abundance of milk, when digested in the manner just described becomes an almost homogeneous pulpy mass, which, when the crusts have been removed, is usually acceptably retained by the irritable stomach. In extreme cases, however, it may advantageously be strained and the fluid portion alone used, in which the partially-peptonized solution of casein of the milk is reinforced by actually-digested gluten and starch of the bread, together with a very little dextrin. Plain light sponge-cake may be similarly digested, and occasionally forms a desirable change.

In conclusion, I would express the hope that these rather homely suggestions may prove of value in other hands in extending the somewhat scanty bill of fare suited to patients suffering from gastric hyperæsthesia, and the various neurotic troubles of which such a condition may be the exciting cause.

Dr. G. BETTON MASSEY made a few remarks on

THE POLARITY OF CURRENTS OF MEDICAL COILS.

He called the attention of the Society to a singular omission made by the authors of most books on electro-therapeutics. After stating in the introductions that induced currents were to-and-fro, with constantly-changing polarity, they subsequently refer to these as having a fixed polarity, and make no explanation of this seeming impossibility. It is a fact readily tested by any one, that these coils furnish a current of one direction (the direct induced) at the opening of the battery circuit and none at the closure. As it is difficult to close the battery circuit by hand in these batteries without an irregular opening occurring at the same time, the currents due to this "raggedness" of the contact have been mistaken by some for inverse currents induced by the closure. Care, however, will eliminate this source of error, and prove that only currents produced in both primary and secondary coils at opening of the battery current are strong enough to be perceived by the senses. In the primary coil, whatever induction occurs at the closure, of course, goes through the cell as the short route. In the secondary coil this closure-current is supposed to be inhibited by the simultaneously-formed extra current of the primary coil. At any rate, it is not strong enough to be perceptible, and all currents therefore have a genuine polarity in our faradic batteries.

Dr. LLOYD said that he did not think that Dr. Massey was quite just in his criticism on modern writers, as Erb and one or two others mentioned the facts in their works.

Dr. MASSEY said he was misunderstood, as he had said that *most* writers did not allude to it.

TEMPERATURE RECORD OF EACH SIDE OF THE BODY IN A CASE OF HEMIPLEGIA.

Dr. W. SINKLER said he wished to call the

* Read at the October meeting.

attention of the Society to a temperature record which he observed in a case of hemiplegia. He said from the beginning to the end of the seizure the temperature on the affected side was from one-fifth to one degree higher than on the other side.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, OCTOBER 2, 1884.

The President, R. A. CLEEMANN, M.D., in the chair.

DR. WILLIAM GOODELL read a paper on

RAPID DILATATION OF THE UTERINE CANAL.

(See page 265.)

Dr. HARRIS inquired about the danger of lighting up a former ovaritis by dilatation. The operation is successful, but that is its danger.

Dr. GOODELL said that he does not hesitate to operate, but always uses opium first, so that by the time the operation is over the patient is under its influence. He keeps them in bed and under the opium until tenderness has passed entirely away.

Dr. WILLIAM GOODELL exhibited a

DERMOID CYST OF THE RIGHT OVARY.

A saleswoman, aged 27, was obliged to give up her situation because she found herself unable to stand for any length of time. Her physician discovered a pelvic tumor, and called in Dr. Goodell to see her. The diagnosis was obscure, but he leaned to a fibroid degeneration of the right ovary. The woman was otherwise well, suffering no pain whatever, except when she was in the upright position. The operation was performed on September 8, and the tumor turned out to be a dermoid cyst. Being enveloped in the broad ligament, it was removed with difficulty. It is stuffed with hair and contained a plate of bone, the sharp edge of which was readily felt per vaginam; but it threw no light on the diagnosis, as it was mistaken for a fibroid spur. His patient did uniformly well, and is now out of bed. He stated that in his experience these tumors are very vulnerable, and often resent even so slight an operation as aspiration, inflammation and suppuration quickly setting in. A physician had to-day brought to his office a young woman who had been tapped last June with a trocar. Long hairs and much sebaceous matter escaped through the opening, which had not yet healed up, and it was for this reason that he had been consulted. Upon passing in a uterine sound, he struck a foreign body, which, from its density and the sharp click it gave, he was disposed to think was a tooth. He advised dilatation of the fistulous track and the removal of the offending body.

TWO CASES OF ÖOPHORECTOMY.

Dr. GOODELL also exhibited the ovaries which he had removed on September 17 and 29 from two patients, who now were doing well. He stated that the amount of tissue-change in these ovaries was very slight, and yet the suffering of each patient had been great. One had been an invalid for several years and bedridden for the past six months. She had lost much flesh, and was always groaning from left ovarian pain unless under the influence of large doses of morphia administered hypodermically. The left ovary was found to be undergoing cystic degeneration, but the right one was so sound that in its removal he was glad to have the backing of Prof. W. S. Playfair, of London, who was present at the operation. For he believed that in most cases needing öophorectomy the results usually showed failures unless both ovaries were removed and the menopause established. Convalescence after the operation had been retarded by great and painful swelling of both parotid glands, which developed without any marked rise in the temperature and without acceleration of pulse, and declined without suppuration,—behaving exactly like mumps. This made his third case of parotitis following the removal of the ovaries. Not one had ended fatally, and from the very slight febrile movement he thought that the complication was not symptomatic, as in blood-poisoning, but sympathetic, and that a strong kinship, recognized by laymen, existed between the sexual organs and the cervical glands. Since the operation all pelvic pain had ceased.

The other patient was a poor woman, aged 30, the mother of seven children. She was sent to him by Dr. George S. Hull, of Chambersburg, Pa. Three years ago she began to suffer from double ovaralgia. The pain never left her wholly, but it began to increase in severity a week before the period, culminated during the flux, and faded off afterwards. Large doses of anodynes were also needed in this case, and she was unable to work. The case was clearly one of ovarian dysmenorrhœa, and he believed that she would be permanently cured.

BACILLI IN SYPHILIS.—The discovery of bacilli in syphilitic lesions is announced by Dr. Lustgarten (*Wien. Med. Wochensch.*, No. 47). His researches, which were made in Weigert's laboratory at Leipsic, consisted in a special method of preparation and staining of sections of primary chancres and a gumma. In all were found, isolated or in small groups, slender, straight, or slightly-curved bacilli, much resembling tubercle-bacilli. The organisms were embedded within swollen lymphoid cells, and exhibited transparent spots, which resembled the "spores" of Koch's tubercle-bacillus.—*Lancet.*

REVIEWS AND BOOK NOTICES.

THE PHYSICIAN'S DAILY POCKET-RECORD. Comprising a Visiting-List, many useful Memoranda, Tables, etc., by S. W. BUTLER, M.D. Nineteenth year. New and thoroughly-revised stereotype edition, with Metric Posological Table, etc. Edited by D. G. BRINTON, M.D. Philadelphia, 1885. Patent flap.

This is a standard visiting-list, well known and generally liked by those who keep a pocket-record: it is substantially bound, with a self-acting clasp, contains good paper, and satisfactorily answers its purpose.

THE PHYSICIAN'S VISITING-LIST (LINDSAY & BLAKISTON'S) FOR 1885. Thirty-fourth year of publication. Philadelphia, P. Blakiston & Co.

Blakiston's Visiting-List for 1885, with the tuck-flap, is an old favorite with many members of the profession. It is a little smaller in size than the preceding, but contains the usual lists of new remedies, poisons and antidotes, and posological table, and is a good, practical pocket-record.

THE PHYSICIAN'S COMBINED DAY-BOOK AND LEDGER. By H. T. HANKS, M.D., New York. For sale by J. H. Vail & Co., New York. Half-Russia back and corners, and cloth sides. For 2200 accounts, $4.50; 3700 accounts, $5.50.

Those who do not use a pocket visiting-list will find in the Combined Day-Book and Ledger a system of book-keeping well worth examination. It is claimed that in its facilities for keeping the accounts legibly and correctly with the least possible expenditure of time and labor this method is superior to all others that have ever been devised. From careful examination, it appears that this system of book-keeping has many and decided advantages to commend it to the attention of the busy physician, who will find by its aid that the labor of keeping his accounts is reduced to a minimum.

HENKE'S ATLAS OF SURGICAL ANATOMY. A Series of Plates illustrating the Application of Anatomy to Medicine and Surgery. Translated and edited by W. A. ROTHACKER, M.D., Pathologist to the Cincinnati Hospital, Lecturer on Pathological Anatomy in Miami Medical College. Cincinnati, A. E. Wilde & Co., 1884. Bound in half-morocco, $10.

The translator and publishers have rendered a real service in placing in such accessible and acceptable form the well-known Topographical Anatomy of Henke: it is a clear, plain exposition of applied anatomy for everyday use. To the student, surgeon, and physician these plates are useful, showing the various organs and structures in their natural relations, thus refreshing the mind and reviving the lessons learned in the dissecting-room and operative surgery class.

There are eighty-one full-page plates, printed on heavy toned paper, with abundant explanatory references upon each diagram. For the most part the figures are well drawn and distinctly printed, and include representations of the principal organs of the body, seen *in situ* and in section. The value of this work is self-evident, and its execution deserves the highest commendation.

THE MEDICAL RECORD VISITING-LIST, OR PHYSICIAN'S DIARY FOR 1885. New York, William Wood & Co.

This is the *édition de luxe* of visiting-lists, having gilt edges, Russia binding, and large flap, and is probably the favorite for New-Year's gifts to physicians.

GLEANINGS FROM EXCHANGES.

GASTRITIS FAVOSA: A NEW DISEASE.—At the meeting of the Vienna Imperial and Royal Society of Physicians on the 28th of November, Prof. Kundrat exhibited specimens of a unique kind. The case was one of favus universalis which had given rise to an abscess of the thigh, and had terminated fatally from severe gastro-intestinal disorder marked by an uncontrollable diarrhœa. Numerous erosions mingled with diphtheritic swellings were found in the mucous membrane of the stomach, and the intestines contained some foul putrescent masses and much mucus. Prof. Kundrat at once declared the diphtheritic swellings to be due to the favus fungus,—a view which was confirmed on microscopic examination. This is the first recorded instance in which the mucorineæ have been the cause of death, as it is the first of favus of the stomach and intestines. Indeed, the naked-eye appearance of the tumors in the stomach closely resembled the favus cups on the skin, and the fact that but little of the fungus was found in the intestine was explained by Prof. Kaposi by their having undergone putrefaction in the bowel. The patient had previously been shown to the Society by Prof. Kaposi as a rare instance of favus, which covered the entire body, affecting even the finger-nails (attributed to his habit of scratching himself constantly). Favus of the stomach is as unknown a condition in animals as it is in man; at any rate, Prof. Csoker, of the Vienna Hospital for Animals, stated that it never occurred in cats, although these animals frequently eat rats infested with the fungus. Prof. Bamberger suggested that in this case the gastric mucosa was in an unhealthy condition at the time of infection, thereby affording a favorable nidus for the growth of

the fungus. It must be borne in mind that the mucorineæ, unlike the schizomycetes, can thrive in acid liquids, and may therefore grow with impunity in the stomach. The case is of great importance, as showing that, if they do gain access to the interior of the body, these fungi may be a source of danger and lead to a fatal result, thereby disproving the usually-accepted notion of their harmless character.—*Lancet.*

THALLIN.—The industry of Continental chemists in the application of the synthetical methods to the formation of new compounds has brought to light a new antipyretic agent, which appears to have been used successfully in a large number of cases in the clinic of Prof. Nothnagel. It has the constitution of a secondary chinoline base, being one of a number of chinoline derivatives prepared by Prof. Skraup, and is represented by the systemic name, "Tetrahydroparachinanisol." The salts of this base, which have an acid reaction, are freely soluble in water, and have the property of forming green compounds when treated with solution of ferric chloride and oxidizing agents. On account of this peculiarity, the cumbrous systemic name has been dropped in favor of the shorter designation, "thallin." The hydrochlorate, sulphate, and tartrate of thallin and the hydrochlorate of ethyl thallin are the salts that have been employed, and these are said to show great antipyretic activity in doses of quarter, half, and three-quarters of a gramme, —a point in which thallin would seem to compare favorably with some of its competitors. The lowering of the temperature is said to take place gradually and to last a considerable time, whilst it is not accompanied by any secondary disturbances. Thallin can be conveniently administered in wafers containing a quarter or half of a gramme of the sulphate. Two other chinoline derivatives have been experimented with; one of them has but slight antipyretic properties, whilst the other was fatal to guinea-pigs in doses of from .2 to .6 gramme, violent tetanic seizures being excited.—*Lancet.*

ALKALOIDS OF QUEBRACHO.—For a long period of time the inhabitants of South America have employed quebracho on account of its febrifuge, tonic, antiasthmatic, and astringent properties. White quebracho, of which three species are recognized, is a tree belonging to the family of Apocynæ, which abounds in the Argentine Republic. Penzoldt in 1879 proved that a decoction of the bark slowed the pulse and diminished the frequency of respiration, but he noted no antipyretic effects. Berthold and Picot confirmed these results. The value of one of the alkaloids, aspidospermine, discovered by Fraude, in relieving dyspnœa has been corroborated by a number of independent observers. Hesse has determined that there are as many as six alkaloids in the aspidospermine of commerce. MM. Eloy and Huchard have separated the alkaloids in a state of purity, and have made a series of thirty-six physiological experiments in reference to their antithermic action. The experiments were made on rabbits, guinea-pigs, and dogs, by means of subcutaneous injections. All the alkaloids were found to exercise a marked antipyretic action. A remarkable effect was also observed to occur in the color of the venous blood, which became of a vermilion-red tint like that seen after poisoning by prussic acid and carbon monoxide. Subcutaneous injections of from .10 to .20 centigramme of the hydrochlorate of aspidospermine, in patients suffering from typhoid fever, appeared to lower the temperature in cases where quinine had had no effect. Lactate of aspidospermatine is a more powerful alkaloid in reducing the temperature than hydrochlorate of aspidospermine; the sulphate of hypoquebrachine and the lactate of quebrachine are still weaker antipyretics.—*Lancet.*

THE ETIOLOGY OF TRICHORRHEXIS NODOSA.—In opposition to the opinion of Eichhorst, who has recently written upon this condition, Dr. Wolffburg states that the sole cause of trichorrhexis nodosa is the improper care of the hair. He showed in his own person that it could be produced in the beard on one side by rubbing it energetically and frequently, the other side meanwhile being normal. The following are the grounds upon which the author bases his belief in the mechanical causation of trichorrhexis (*Centralblatt für Klinische Medicin*, No. 38, 1884): 1. The anatomical appearances,—the hair, except for the nodules, is healthy. 2. The localization,—the affection has hitherto been observed only in the larger hairs of the beard, and especially in those so situated as to be most exposed to mechanical injury when the face is rubbed, as in the beard covering the lower jaw. 3. The explanations hitherto offered are insufficient. 4. The supposed incurability of the affection is easily explained when one remembers that the treatment usually recommended (frictions with alcoholic preparations or irritating salves) only furnished new sources of irritation to the ill-treated beard.—*Medical Record.*

THE CONTAGIOUSNESS OF INEBRIETY.—The climax of absurdity in regard to inebriety appears to have been reached. In a recent number of the *Alienist and Neurologist*, Dr. Crothers, assuming that inebriety is a disease, classifies it among contagious disorders, and ventures to illustrate his conclusion by the citation of cases, and pretends to trace its analogy to measles and other zymotics, but he omits to take note of the difference in their environments. — *Sanitarian.* [If this be true, what a field it opens for preventive inoculation!—ED. P. M. T.]

IRRITABLE SPINE AND SPINAL MYALGIA.—In a lecture (*The Practitioner*) upon this subject, Dr. S. J. Gee says that the disorder is a real one and not hysterical, although it may be associated with hysteria. Although the patient often exaggerates her symptoms, it cannot be regarded as imposture, because it is unintentional and has underlying it a genuine disorder. Irritable spine means simply painful spine, either neuralgic or myalgic. In regard to treatment, as the patients are generally poorly fed, it is necessary in the first place to see that they take food enough, that it is of good quality, and that it is given sufficiently often. A moderate allowance of alcohol in the form of stout, ale, or wine may be reckoned as part of the food. The muscles must be well nourished, or the treatment will do little good.

Secondly, the muscles must be rested. The pain is of the nature of fatigue. The muscles of the neck and back cannot be rested unless the spine be supported in its whole length; the patient must lie on a couch or recline in a very easy chair with a long, high back, and with elbows, so that the weight of the arms is taken off the spine. Yet here also is a difficulty. A prudent man thinks twice, or a dozen times, before he condemns a young woman to the sofa. There is danger that she will never rise from it, and will be a burden to herself and all her friends and relatives for the rest of her life. Beware of insisting too much upon the repose of the couch: it were sometimes far better that they should continue to complain of their pains. In this dilemma the best advice I can give you is that you should recommend a certain amount of reclining, and carefully watch lest your patient show signs of becoming a slave to the sloth of the sofa. With the better sort of women there is little fear of this: they prefer an irritable spine to laziness.

Another means of resting the muscles which perhaps occurs to you is well-fitting stays. But on second thoughts you will see that stays do not come high enough to support the head and shoulders; and it is here that spinal myalgia most commonly shows itself.

Local applications to the spine, more or less anodyne, are useful. Warmth, for instance. Our patient declared she was much relieved by a douche of hot water to the spine. Belladonna liniments are useful.

Lastly, I think that patients who have once developed an irritable spine seldom altogether lose it, or at least they will seldom confess that they are altogether free from pain in the back.

CONVULSIONS CAUSED BY CONSTIPATION.—Dr. J. F. Baldwin, in the *Columbus Medical Journal*, reports the case of a lady 67 years of age, though apparently much older, whom he found in a general convulsion. The eyes were turned up, the eyelids half open and twitching, the limbs jerking about and with a slight tendency to opisthotonus. On extending the arms at right angles to the body, they would remain rigid, as in catalepsy, except some fibrillary twitching, for some minutes, when they would gradually, and with increased twitching, sink to the sides. She was entirely unconscious, and could not be aroused. She had been in this condition for three hours. Two hours later, after several large doses of potassium bromide, she returned to consciousness, and said that she felt as well as usual. She had taken salts the night before, which had operated freely. The urine was normal. The next day her convulsions returned, and recurred daily for the next two weeks. A full dose of croton oil was administered, which operated freely. Antispasmodics, quinine, and purgatives failed to relieve her condition, and she was manifestly growing weaker. Upon making a digital examination, the uterus was found in good position, but an impaction of fæces as large as a child's head was discovered in the rectum, notwithstanding the purgatives had acted freely. The mass was removed, and the patient at once recovered.

MISCELLANY.

THE NINTH INTERNATIONAL MEDICAL CONGRESS, TO BE HELD IN WASHINGTON, D.C., IN 1887.—The Committee on Organization of the Ninth International Medical Congress met in Washington, D.C., on November 29, 1884, for organization.

The following rules were adopted:

1. The Congress will be composed of members of the regular medical profession who shall have inscribed their names on the register of the Congress and shall have taken out their tickets of admission. As regards foreign members, the above conditions are the only ones which it seems at present expedient to impose.

The American members of the Congress shall be appointed by the American Medical Association, by regularly organized State and local medical societies, and also by such general organizations relating to special departments and purposes as the American Academy of Medicine, the American Surgical Association, the American Gynæcological, Ophthalmological, Otological, Laryngological, Neurological, and Dermatological Societies, and the American Public Health Association; each of the foregoing Societies being entitled to appoint one delegate for every ten of their membership.

The members of all special and subordinate committees appointed by the General Committee shall also be entitled to membership in the Congress, together with such other persons as may be specially designated by the Executive Committee.

All Societies entitled to representation are requested to elect their delegates at their last regular meeting preceding the meeting of the Congress, and to furnish the Secretary-General with a certified list of the delegates so appointed.

2. The work of the Congress is divided into eighteen sections, viz.: 1. Medical Education, Legislation, and Registration, including methods of teaching, and buildings, apparatus, etc., connected therewith. 2. Anatomy. 3. Physiology. 4. Pathology. 5. Medicine. 6. Surgery. 7. Obstetrics. 8. Gynæcology. 9. Ophthalmology. 10. Otology. 11. Dermatology and Syphilis. 12. Nervous Diseases and Psychiatry. 13. Laryngology. 14. Public and International Hygiene. 15. Collective Investigation, Nomenclature, and Vital Statistics. 16. Military and Naval Surgery and Medicine. 17. Experimental Therapeutics and Pharmacology. 18. Diseases of Children.

3. The General Meetings will be reserved for the transaction of the general business of the Congress and for addresses or communications of scientific interest more general than those given in the Sections.

4. Questions which have been agreed upon for discussion in the Sections shall be introduced by members previously nominated by the officers of the Section. The members who open discussions shall present a statement of the conclusions which they have formed as a basis for debate.

5. Notices of papers to be read in any one of the Sections, together with abstracts of the same, must be sent to the Secretary of that Section before April 30, 1887. These abstracts will be regarded as strictly confidential communications, and will not be published until the meeting of the Congress. Papers relating to questions not included in the list of subjects suggested by the officers of the various Sections will be received. Any member, after April 30, wishing to bring forward a subject not upon the programme, must give notice of his intention to the Secretary-General at least twenty-one days before the opening of the Congress. The officers of each Section shall decide as to the acceptance of any communication offered to their Section, and shall fix the time of its presentation. No communication will be received which has been already published, or read before a Society.

6. All addresses and papers, read either at general meetings or in the Sections, are to be immediately handed to the Secretaries. The Executive Committee, after the conclusion of the Congress, shall proceed with the publication of the *Transactions*, and shall have full power to decide which papers shall be published, and whether in whole or in part.

7. The official languages are English, French, and German.

No speaker shall be allowed more than ten minutes, with the exception of readers of papers and those who introduce debates, who may occupy twenty minutes.

8. The rules, programmes, and abstracts of papers will be published in English, French, and German.

Each paper or address will appear in the *Transactions* in the language in which it was delivered by the author. The debates will be printed in English.

9. The officers of the General Committee on Organization are a president, three vice-presidents, a secretary-general, and a treasurer, and those elected to these positions will be nominated by the General Committee to hold the same offices in the Congress. All vacancies in these offices shall be filled by election.

10. There shall be an Executive Committee, to be composed of the President, Secretary-General, and Treasurer of the General Committee, and of four other members, to be elected by the General Committee. The duties of the Executive Committee shall be to carry out the directions of the General Committee, to authorize such expenditures as may be necessary, and to act for the General Committee during the intervals of its sessions, reporting such action at the next meeting of the General Committee.

11. There shall be a Standing Committee on Finance, composed of five members, to be appointed by the President, subject to the approval of the Executive Committee.

12. Those who are elected as chairmen of the several Sections shall be thereby constituted members of the General Committee.

The officers elected are as follows:

President.—Dr. Austin Flint, Sr., of New York.

Vice-Presidents.—Dr. Alfred Stillé, of Philadelphia; Dr. Henry I. Bowditch, of Boston; Dr. R. P. Howard, of Montreal, Canada.

Secretary-General.—Dr. J. S. Billings, U.S. Army.

Treasurer.—Dr. J. M. Browne, U.S. Navy.

The Executive Committee.—The President, the Secretary-General, and the Treasurer (*ex officiis*); Dr. I. Minis Hays, of Philadelphia; Dr. A. Jacobi, of New York; Dr. Christopher Johnston, of Baltimore; Dr. S. C. Busey, of Washington.

RECENT MEDICO-LEGAL NOTES.—A Massachusetts court not long since decided an interesting malpractice case, where the defendant, an irregular medical practitioner, treated a patient by applying, with her consent, flannels saturated with kerosene-oil. Under this treatment she died, and the physician was indicted for manslaughter and convicted. This verdict was appealed from on the ground mainly that, under the Massachusetts law, a person cannot be guilty of manslaughter unless he does some unlawful act, and that there was no law which prohibited any man

from prescribing for another with his consent, if he honestly intends to cure. The defendant also appealed from the judge's ruling that there need be no evil intent, but if, by gross and reckless negligence, the defendant caused the death, he was guilty of culpable homicide.

There seems to have been no question raised on the trial that the so-called doctor had little knowledge of medicine, and this lack of knowledge was asserted in his behalf as a reason for believing that there was no evil intent.

All of the objections raised were overruled by the Appellate Court and the conviction sustained.

A portion of the opinion is as follows: "In dealing with a man who has no special training, the question whether his act would be reckless in a man of ordinary prudence is equivalent with an inquiry into the degree of danger attaching to the act of common experience under the circumstances known to his action. It is here implied, and is undoubtedly true as a general proposition, that a man's liability for his acts is determined by their tendency under the circumstances known to him, and not by their tendency under all the circumstances actually affecting the result, whether known or unknown.

"Another cannot escape on the ground that he has had less than a common experience. Common experience is necessary to a man of ordinary prudence, and a man assuming to act as the defendant did must have it at his peril. Here the defendant knew he was using kerosene. More than that, he saw from day to day how it worked. The jury found that it was applied as a foolhardy presumption or gross negligence, and that is enough.

"When the defendant applied the kerosene to the person deceased in a way which the jury have found to be reckless, or, in other words, seriously and unreasonably endangering life according to common experience, he did an act which his patient could not justify by her consent, and which therefore was an assault, notwithstanding that consent."

In the recent case of Wm. C. Rhinelander in New York, who was charged with a murderous assault upon Mr. John Drake, the family lawyer, and who was alleged by his relatives to be insane, the unfortunate results of the present system of expert evidence were clearly shown. Mr. Rhinelander insisted with the greatest emphasis that he was perfectly sane, but, according to the New York Code of Criminal Procedure, when there is an allegation of insanity this point must be settled before the prisoner is called upon to plead to the indictment. A commission was appointed, which took many hundred pages of testimony, a large number of physicians being called by one side to sustain and by the other to overthrow the charge of insanity. A majority of the commission reported in favor of Rhinelander's insanity, but one of the commissioners said that he was perfectly sane, and this latter opinion was accepted by the court, which declared "that the expert evidence is of no value in this investigation. While the physicians called by the people to sustain the allegation of insanity say that the defendant is insane, they differ radically among themselves as to the classification of that alleged insanity. Two say he has general paresis, one says that he is an imbecile, and another that he suffers from melancholia. He cannot have all these conditions at one and the same time; insanity in its initial stages and in its progressed stages cannot coexist in the same person."

The English Court of Appeal has just decided as a question of law that the killing of the boy Parker by Captain Dudley, of the yacht "Mignonette," was not an act of necessity or self-defence, but murder.

It will be remembered that the yacht was lost in the South Pacific Ocean some months since, and the captain, two sailors, and the boy took to a boat. They were tossed about on the open sea for several weeks, and for nearly three weeks were without food, and for the last five days without water.

Under these circumstances, when the boy seemed to be fast sinking and there was every prospect that all would die, the captain killed the boy, and the survivors sustained life upon his flesh until they were rescued. The fact of the killing was not concealed, and did not appear to be considered criminal by Captain Dudley.

Upon arrival in England he was, however, arrested for murder, and the trial has just been concluded. The jury were charged by Baron Huddelestone, the judge, that the act was not self-defence or necessity, but the jury did not pass upon the criminality of the deed; they simply found the facts and recommended the mercy of the court. The question of law as to what the facts as proven constituted, whether murder or not, was reserved for the Court of Appeal, and this tribunal has just unanimously decided that the act is murder. Sentence of death has been pronounced upon the unfortunate captain, but it is probable that this sentence will be commuted. It hardly seems as if a person without food for nearly three weeks, and for nearly a week without water, is responsible for his acts. The strain under such circumstances upon the brain is awful to contemplate, and might well overpower all resistance of the will. There has never been a similar case in the courts, and the only one at all like it was tried some forty years ago. In that instance passengers were thrown overboard to lighten a boat, and the court decided that seamen not needed for the working of the boat should be sacrificed before the passengers, and that the doomed

men should be chosen by lot. As this was not done, the court held the case to be that of manslaughter.

IMPORTANT TO THOSE WHO USE MALT-EXTRACT.—W. W. Lamb, M.D., Chief Drug-Inspector of the Port of Philadelphia, writes that he has used Johann Hoff's Malt-Extract for the past five years in his private practice, and has found it a health-restoring beverage and tonic nutritive, being especially good for persons convalescing from fever, for cases of dyspepsia, for nursing mothers, and for weakly children, and also in lung-troubles. His attention had been drawn by the immense importation semi-monthly, and he states that about a million bottles imported by Eisner & Mendelson have passed his inspection in the Custom-House during the past five years.

A VALUABLE THERAPEUTIC SUGGESTION.—M. Dujardin-Beaumetz presented to the Société de Thérapeutique siphons of water, lemonade, and white wine, resembling seltzer water, excepting that oxygen replaced carbonic acid. They are recommended for gastric disorder, diabetes insipidus, and loss of appetite.

THE ANNUAL MEETING OF THE COLLEGE OF PHYSICIANS was held Wednesday, January 7, when the following officers were elected: President, J. M. Da Costa, M.D.; Vice-President, S. Weir Mitchell, M.D.; Secretary, Richard A. Cleemann, M.D.; Treasurer, Chas. Stewart Wurts, M.D.; Honorary Librarian, J. H. Hutchinson, M.D.; Recorder, J. Ewing Mears, M.D.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY held its annual meeting on the 7th instant. The following officers were elected: President, R. J. Levis, M.D.; Vice-Presidents, O. H. Allis, M.D., and De Forest Willard, M.D.; Secretary, H. Leffmann, M.D.; Corresponding Secretary, M. S. French, M.D.; Treasurer, L. K. Baldwin, M.D.; Librarian, C. M. Seltzer, M.D.

THE ACADEMY OF SURGERY held a stated meeting on the 7th instant, at the College of Physicians, when Dr. John H. Packard delivered the annual address.

GOLD MEDAL AWARDS TO UNITED STATES PRODUCTS.—Among the food-products exhibited at the International Health Exhibition, London, 1884, from the United States, were beef-peptonoids and maltine. Both of these preparations carried off the only gold medal and highest award against numerous competitors in their respective classes. All food-preparations were critically analyzed at this exhibition by a jury composed of the best chemists in the country.—*London Lancet.*

LONDON LECTURES.—Dr. Osler, of Philadelphia, will deliver the Gulstonian Lectures for 1885 at the College of Physicians; Dr. Herman Weber will deliver the Croonian, and Sir Andrew Clark the Lumleian Lectures.

NOTES AND QUERIES.

MEDICATED TAMPONS IN DISEASES OF WOMEN.

1504 WALNUT STREET, PHILA.

MR. HARRIS, of H. C. Blair's Sons, cor. Eighteenth and Chestnut Streets, has made for me, with great care and skill, some valuable cotton tampons, which I have used in conveying various substances to the vaginal walls and uterus, and also in a measure giving support to the congested and inflamed tissues until they became more tolerant to a pessary. These tampons are made of masses of absorbent cotton, salicylated, borated, carbolized, and thymolated, folded into conical shape, and coated with a preparation which keeps them in form so as to be easily introduced until they come in contact with the heat and moisture of the tissues. To each a string is attached firmly, by which it can be removed. They can be introduced preferably with a speculum if it is necessary to place them in a special position, and I usually dip them for an instant in hot water if the vagina is very dry and inflamed. Otherwise I coat the truncated end of the cone with a small quantity of vaseline, or with the glycerole of tannin or of sanguinaria if these substances are required.

These tampons are also used to convey iodoform to the tissues. Twenty or thirty grains of iodoform are placed in the centre, and after the shape is given to the mass very little odor is perceptible; but the heat of the body at once volatilizes the iodoform and brings it in direct contact with the mucous membrane. These tampons will not become offensive, and can be allowed to remain *in situ* a week or more. This is especially valuable when a number of them are used to correct displacement.

To those who have read Professor Parvin's excellent paper before the Lehigh Valley Society (*Phila. Med. Times*, vol. xv., page 8) the uses of pledgets of soft antiseptic materials in the vagina are well known. They absorb secretions, convey antiseptic and other substances directly to the mucous membranes; they deplete inflamed tissues, separate surfaces which mutual contact irritates, and in certain cases relieve the tension on the uterine ligaments which may themselves be congested or inflamed by supporting the heavy uterus, and thereby allowing medication, both internal and local, to relieve the engorgement and restore tonicity to those tissues and the vagina. Also in old displacements where adhesions have taken place careful packing and gradual restoratives will be required before a hard support can be worn. For this purpose Mr. Harris has made some tampons of fine-carded wool, borated, which, being impervious to water and antiseptic, can be placed *in situ* and act mechanically.

With considerable experience, I am satisfied that much can be done by the proper use of these measures.

J. M. KEATING, M.D.,
Visiting Obstetrician to the Philadelphia Hospital;
Surgeon to Maternity Hospital.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 21, 1884, TO JANUARY 3, 1885.

MCPARLIN, THOS. A., LIEUTENANT-COLONEL AND ASSISTANT MEDICAL PURVEYOR.—Granted leave of absence for three months, on surgeon's certificate of disability. S. O. 301, A. G. O., December 24, 1884.

GIRARD, A. C., CAPTAIN AND ASSISTANT-SURGEON.—Ordered from Department of the Missouri to Department of the East. S. O. 304, A. G. O., December 29, 1884.

JOHNSON, HENRY, CAPTAIN AND MEDICAL STOREKEEPER.—Directed, in addition to his present duties, to perform the duties of Assistant Medical Purveyor in New York City. S. O. 301, A. G. O., December 24, 1884.

WALES, PHILIP G., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty in Department of the Columbia, and ordered to Department of Arizona. S. O. 128, Division of the Pacific, December 17, 1884.

EWING, CHAS. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON (Fort Stanton, New Mexico).—Granted leave of absence for two months. S. O. 304, A. G. O., December 29, 1884.

NAVAL MEDICAL OFFICERS.

There were no changes in the Medical Corps of the U.S. Navy from December 21, 1884, to January 3, 1885.

PHILADELPHIA, JANUARY 24, 1885.

ORIGINAL ADDRESS.

THE GREAT ADVANCES IN SURGERY, AND HOW THEY HAVE BEEN MADE.

Being the Annual Address before the Academy of Surgery of Philadelphia, delivered January 5, 1885,

BY JOHN H. PACKARD, M.D.

MR. PRESIDENT AND GENTLEMEN,—Among the paintings in the rotunda of the Capitol at Washington, there is one which purports to represent the discovery of the Mississippi River by De Soto. Mounted upon a splendid prancing steed, the commander is advancing into a cleared space upon the bank; around him, in glittering armor, are soldiers, some of whom are dragging forward a brightly-burnished brass field-piece; beautiful Indian girls are presenting offerings of flowers and fruit; while chiefs and braves, in all the glory of feathers and paint, are looking on in stolid wonder at the scene.

It seems to me, however, that the artist has totally failed to apprehend or to set forth the true character and grandeur of the event. De Soto and his men, according to the most authentic accounts, had heard rumors of the great river, and had been for weeks struggling through the swamps and forests on their toilsome way in search of it. Weary and worn out, almost ready to give up in despair, they at length found themselves upon its banks, the object of all their labors and hardships attained. We can imagine the forlorn little band of adventurers, hungry and exhausted, with ragged clothing and rusty arms, but every gaunt face lighted up with the joy and exultation of success, as they gazed on the mighty current rolling towards the sea. Mighty as that stream was, it was less sublime than the human energy which had overcome every obstacle to find it, and whose servant it was thenceforth to be.

Other examples of like misconception of historical events might easily be adduced, and it may be that there are very many of them. Actions, perhaps in themselves trivial, which lead to momentous consequences, are apt to be magnified by the medium through which they are afterwards viewed. When the Yankee farmer, crouching behind a fence, fired his old fowling-piece at the officer commanding a squad of British soldiers, he little imagined that the echoes of his shot would be heard all over the world. We see now that he began a contest which was to give freedom to unborn millions and to establish a vast nation, and we are inclined to rank him as a hero. Of all this he knew nothing. It is very possible that he heartily regretted his rash action; he may have even denied it, at times when the Continental cause seemed threatened with ignominious failure.

Much the same sort of illusion is apt, as it seems to me, to invest the prominent events in the onward progress of the science and art of surgery; and my purpose this evening is to consider these great advances, with the actual circumstances attending them. I have found it somewhat difficult to select a title which should define my subject without seeming to promise more than I could hope to perform. But indeed the actual number of such marked strides is curiously small,—smaller, I think, than is generally realized.

Another striking instance of the glamour with which past events are wont to be surrounded is to be found in the well-known picture in the École de Médecine in Paris, representing Ambrose Paré applying the ligature for the first time to check bleeding after amputation. The great surgeon stands in front of a patient whose leg has just been removed. Among the by-standers are several high dignitaries, one of whom offers Paré a heated iron, which he declines, holding aloft in his right hand a bundle of ligatures, which he is about to use.

No such scene, however, can be found described by the chief actor, who, we may be sure, would have put it upon record had it taken place. The honest old man was not averse to chronicling his triumphs, as well as the impression they made upon the spectators. As to his introduction and advocacy of the ligature he speaks at much length, but with as much modesty as conviction. The twenty-fourth chapter of his twelfth book is devoted to this subject. "Verily, I confess," says he, "I formerly have used to stanch the bleeding of members, after amputation, after another manner than that I have a little be-

fore mentioned: Whereof I am ashamed and aggrieved. But what should I do? I had observed my Masters, whose method I intended to follow, always to do the like." He then describes the suffering and the bad results which attended the use of the actual cautery, and concludes: "Wherefore I must earnestly entreat all Chirurgeons, that leaving this old and too too cruel way of healing, they would embrace this new, which I think was taught me by the special favour of the Sacred Deity; for I learnt it not of my Masters, nor of any other; neither have I at any time found it used by any: Only I have read in *Galen* that there was no speedier remedy for stanching of blood than to bind the Vessels (through which it flowed) toward their roots, to wit, the Liver and Heart. This precept of *Galen*, of binding and sewing the Veins and Arteries in the new wounds, when as I thought it might be drawn to these which are made by the amputation of members, I attempted it in many; yet so, that at first in my budding practice thereof, I always had my cauteries and hot Irons in a readiness, that if anything happened otherwise than I expected in this my new work, I might fetch succour from the ancient practice; until at length confirmed by the happy experience of an almost infinite number of particulars, I bid eternally adieu to all hot Irons and Cauteries which were commonly used in this work."

Against the new method of hæmostasis there was a particularly virulent objector, one Gourmelen, whose name is otherwise unknown. This man's words Paré quotes in his twenty-ninth book, and then, after some argument, relates several instances in which the ligature was used by his direction, in each case mentioning the operator by name. Unquestionably, had there been any such brilliant exhibition of the novel practice as the painter has undertaken to represent, it would have found a place among these; and the conclusion is unavoidable that it was imaginary.

Paré's official standing was so high, and his influence so great, that one might suppose a change of practice which had his sanction would have been at once effected wherever it became known. Moreover, the method was not really a new one. There are not wanting those who believe that Celsus, who mentions the ligature as a means of checking hemorrhage in accidental wounds, had employed it also after amputation; and that he omitted distinct mention of it in the thirty-third chapter of his seventh book, in describing the removal of gangrenous parts, simply for the sake of conciseness. But Celsus was not only concise; he was also thorough, and would scarcely have left so important a matter to be inferred from other passages in his writings. And the plain meaning of the concluding sentence in the place above referred to is, that after the first dressing, amputation-wounds should be treated like others in which suppuration is to be expected.

So far was the great and practical step advocated by Paré from being generally or immediately appreciated, that nearly two hundred years after the operations recorded by him, we find Samuel Sharp, Assistant-Surgeon to Guy's Hospital, speaking of the actual cautery as follows: "Within these last fifty years this barbarous Practice has by degrees fallen into Disuse, both in France and England; but it is not absolutely discarded in every part of Europe." Hence it was at least one hundred years after a man, so eminent as Paré was recognized to be even in his own day, had made an urgent and really eloquent appeal on behalf of the ligature, before any general abolition of the cautery could be effected. Mr. Sharp, after presenting various arguments and combating various objections to the tying of arteries, thus concludes: "I hope I shall not be censured for labouring to establish a Point which no Man of Eminence in London contradicts. It is a sufficient Apology for me, that the Writings of the ingenious Surgeons I allude to, being in the Hands of our English Students, may possibly mislead them, if not warned against the Danger. Besides, Improvements of all kinds are so slowly propagated, that this, amongst others, is not Universally practised in the distant Counties of our own Kingdom; and therefore a further Enforcement of its Advantages will not, I believe, appear to be a useless Undertaking."

One would suppose from the words just quoted — the concluding ones of Mr. Sharp's original work — that he was a man thoroughly persuaded in his own mind as to the value and reliability of the ligature. Yet in his fourth edition there immediately follows a postscript, added for the purpose of noticing a new remedy,

—agaric,—with the declaration of opinion upon it by the French Royal Academy of Surgery, on the strength of which the inventor, M. Brossard, received from the king a gratuity and a pension. Mr. Sharp says, "As it hath not yet been sufficiently practised on the Femoral Artery, to warrant the Recommendation of it on large Vessels, in preference to the Ligature, I have forborne to speak of it in the Body of the Book. Should it hereafter be found equally secure with the Ligature, it would certainly be a most useful Discovery," etc.

This last passage seems to me to be singularly illustrative of a sort of almost superstitious credulity as to the special powers of medicinal agents, which stamped strongly the views of the older writers, growing, however, gradually less and less marked, until in our day it has given place to a scepticism which may indeed be far more philosophical, but which is certainly far less comfortable as a basis for therapeutics.

But I will ask you to let me recur again to the strange history of the matter we have had under discussion, which it is difficult for the modern mind—might I say for the American mind?—to comprehend.

Celsus, in the first century of our era, spoke of the ligation of arteries, in accidental wounds at least, not as being a new thing, but as a recognized procedure. How long it had been known before his time does not appear. It is mentioned again by Galen, and in the seventh century by Paul of Ægina. Yet not only these great men, but all their contemporaries, and those who followed them, continued to use vitriol buttons, cauteries, and like means for checking the flow of blood after amputations; it was reserved for Paré, in the sixteenth century, to extend the simple and familiar idea of the ligature to cases of the latter class. It would seem, indeed, as if this were but a small step to take, and one easy to follow. That it was not lost sight of, we learn from the writings of Le Clerc, Daniel Turner, and Gooch, in the eighteenth century. It must have been taught in the London schools; and yet scarcely a hundred years ago one of the surgeons of Guy's Hospital thought himself called upon to argue in its behalf, saying that there were in England many who had not yet abandoned the old and cruel practice.

It may be even more impressively stated in another way. The ligation of arteries in accidental wounds was known in the time of Christ, but the idea was not applied to amputations until after the founding of the Royal College of Physicians in London, nor did this use of the ligature become universal until almost within the time of persons now living.

We are fain to think that such blindness at this day would have been out of the question; and, indeed, it seems inconceivable to the inquisitive, progressive, and practical spirit of our age,—impossible with the glare of light which modern customs and appliances have brought to bear upon all subjects of study, and with the existing facility of interchange of ideas. We flatter ourselves that had Paré lived in our time, and introduced such an improvement in surgical practice, the idea of the painter would not have been so very far out of the way, and the great step would at once have been taken with all the *éclat* with which he imagined it to have been surrounded. But we must not forget that our standpoint is very different from that of his contemporaries, and should have charity for their conservatism.

The science and art of surgery have been built up, as we now have them, by observation and invention. Yet this expression is hardly correct. In the construction of a building the workmen are guided by a plan. The architect has a definite idea in his mind of what the result is to be, and to the carrying out of this every man's task is subordinated. No such plan can exist in a science which has to deal with constantly varying conditions, with an incalculable number of combinations; or in the art associated with that science.

We have, however, a vast mass of experience, accumulated and recorded by hosts of workers, past and present, and marshalled into a sort of order by those whose abilities and position have qualified them for the task. Certain general principles have thus been evolved, which constitute the body of surgical science. Yet if one were to undertake to set down absolutely unquestionable doctrines or principles only,—fixed facts, which it is certain cannot by any further degree of research be changed or set aside,—he would find that the resulting material would be of very small bulk indeed. What had seemed to be a stately building would turn out to consist of a very few stones, with a shapeless and

irregular, because temporary and mutable, scaffolding over them.

This statement may appear to be very disparaging to the immense amount of surgical literature; but in fact this is made up largely of history, and of quotation of the recorded experiences and opinions of others. Especially is such the case in this age of bookmaking; and the difficulty is not that there is so much that is new to be read, as that it can scarcely be separated from the old with which it is mixed. The books which have really been great additions to the world's stock of knowledge have been but few, almost as few as the great advances in surgery, which we are now engaged in considering.

A great step in surgery is taken when a new procedure, adapted to various morbid conditions, is devised, or when a procedure already known is extended in its application to one or more classes of cases which are of frequent occurrence, and which have previously been looked upon as intractable.

Such a step was taken by the surgeon, whoever he may have been, who first amputated a limb for other cause than gangrene. Among the ancient surgical writers we find no mention of any such operation. Their idea was simply to separate dead parts, incising through them only, and trusting to the cautery to destroy what was left up to the still living tissues. In the Book of Deuteronomy, however, it is commanded that as a punishment for a certain immodest act, the hand of a woman should be cut off; and in the Book of Judges the maiming of captives by cutting off their thumbs and great toes is spoken of as having been done in seventy-one cases. In neither instance is there any explanation given or comment made, and we are left to infer that operations of this kind were not unfamiliar to those who received and preserved these writings. One can scarcely help speculating whether the civilization of the ancient Egyptians, Persians, or Hindoos may not have included surgical skill in the treatment of the accidents met with by those engaged on their vast architectural works. That they had mechanical knowledge which perished with them cannot be doubted, yet this must have been familiar to great numbers of workmen, and continually seen by the people, whereas medicine and surgery, being in the exclusive possession of the priestly or other privileged classes, and being of necessity private in their exercise, would have been far more likely to be lost with the decadence of the nations. Perhaps we are too ready to assume that a basis of anatomy and physiology must have been wanting to any such ancient system of surgery, although the tendency of the religious beliefs of that day, so far as we know them, was strongly opposed to the desecration of the human body involved in its dissection. Possibly there were burnt in the Alexandrian Library records which would show that our most recent improvements are really only revivals of things familiar to the physicians of the Pharaonic times. All this, however, is of course mere conjecture.

With the loss of simplicity in habits of life, with the introduction of fire-arms, and in the present century with the invention of steam machinery, the occasions of amputation have very largely increased, and improvements in its mode of performance were inevitable. But not one of these changes has equalled in magnitude the first step,—the demonstration that a diseased or injured limb might be removed without waiting for its death, and that by this removal the life of the whole organism as such might be preserved.

In connection with the subject of amputation, and recurring for a few moments to the checking of hemorrhage after it, let me remind you that both Galen and Paul of Ægina advise that if a wounded vessel be large it should be seized with a hook, stretched, and twisted moderately. It seems to me that this expression could hardly refer more distinctly to the tenaculum as we now have it; yet by some modern writers the invention of this instrument is credited to Bromfield, in the last century.

And let me digress for a few moments to refer to certain improvements which, while valuable, cannot be regarded as great steps in the true sense of the term. One instance only will suffice.

Paré figures what he calls "the crow's beak, fit to draw the vessels forth of the flesh, so that they may be tied." This instrument was merely a pair of nippers with flat blades, ridged or roughened at their inner sides near the ends, so as to give

them a secure hold. The opening and closing of the blades required a separate movement of the hand. Le Clerc speaks of forceps having a spring, or the *valet à patin*, this latter being a ring slipped down over the blades, so as to keep them closed. The spring was perhaps the invention of Assalini. Then it occurred to some one to make the two branches spring outward, so that the instrument was open unless pressed together. A further advantage was gained by adding a slide, so that the blades, brought together by pressure between the thumb and finger, could be fastened thus, the whole process being effected with one hand. And by making the ends bulbous, the risk of including the instrument in the ligature was done away with. For special purposes, the ends were very early made toothed.

Now, here was a succession of improvements, resulting in a very perfect instrument, having a very wide range of application; and yet neither the whole process nor any one of its successive steps could be at all regarded as a great advance in surgery. There was no great principle involved in either the construction or the use of the instrument; it was a mere device for subordinate purposes.

To return for a moment to the subject of amputation. When the idea was conceived that the soft parts might be so divided as to insure an ample covering for the bones, it was so much of an improvement as almost to come within the range of our great advances in surgery. But it was not new; it was only a suggestion for the carrying out of a principle which was abundantly recognized already. And the same may be said of the flap method, with all its subsequent modifications; the admirable stumps so often obtained by the circular incision, when properly carried out, have not been surpassed by the results of operations done with the flap, which in fact has only the advantages of greater convenience, of more rapid execution, and sometimes of adaptability.

The introduction of excision of bones and joints was properly a great step in surgery. Its history is curiously like that of some other operations of high value. Filkin, who in 1762 excised the knee-joint, was without followers for nearly twenty years, when his procedure was imitated by Park, with a success which made him an enthusiastic advocate of the measure, and led him to extend its use to the other articulations. The Moreaus, father and son, in France, practised it largely, and, I believe, with gratifying results. Other French surgeons imitated them, and later the operation found promoters in Liston, Syme, and other British operators. In this country, although many joints have been excised to the saving of useful limbs, we may claim more in the way of successful excisions of bones, beginning with the brilliant achievement of Dr. John Rhea Barton, of this city, in 1826, on the anchylosed hip of a sailor. For many of the deformities due to anchylosis, as well as to distortions of the bones, the more modern operation of subcutaneous osteotomy answers better; but I shall have occasion to mention this again.

I am aware that there are not a few surgeons who are inclined to regard the excision of joints with disfavor, on account of the trouble and risk involved in them, and the uncertainty of the ultimate result in any given case. Yet the many instances of perfect recovery with useful limbs,—far more useful than any artificial substitutes could ever be,—and hence the inference that due care only is needed in the selection of the patients to be submitted to such operations, warrant us in assigning to the introduction of these procedures a place among the great advances in surgery.

I shall next refer very briefly to a great step in advance, made by one of the ablest men who has ever adorned the profession of medicine. When John Hunter, in 1785, tied the femoral artery for a popliteal aneurism, he initiated a practice destined, in various forms, to be of vast service in the treatment of a disease for which there had previously been no known remedy. He based the procedure upon a thorough knowledge of anatomy, and upon the most philosophical reasoning; and since his first attempt, which was crowned with brilliant success, the labors of subsequent surgeons in this field have been almost altogether in the direction which he indicated. Instrumental compression, digital compression, and other modifications of means for carrying out the great principle which he laid down, have as yet yielded the best fruits. It would be foreign to my present purpose to speak of the experiments which have been made in other lines, even

if they had been more extensive or more satisfactory than they have yet proved.

I will barely mention subcutaneous surgery, which in the period of a little over fifty years since its introduction by Stromeyer has been so greatly extended in its uses, especially within the last two decades. It was certainly an advance of great importance.

Plastic surgery has made such advances in special directions, within the last half-century, as can scarcely be overlooked. I refer particularly to the operations devised, and successfully carried out, for the relief of vesico-vaginal fistula and of ruptured perineum. The limits of this field have not yet been reached. It is claimed that much good may be effected by suture of the lacerated cervix of the womb, and the already large number of cases in which it has been done with apparent benefit seems to warrant the belief that the claim may be substantiated. I presume there is hardly a surgeon who hears me to-night but has repeatedly been called upon to perform this operation, one of the newest on the list.

No enumeration of the great steps in our art would be complete without reference to abdominal surgery, and especially to its most important feature,—ovariotomy. I know of no more instructive portion of the history of medicine than that relative to the rise and progress of this procedure. Spoken of for two hundred years as a thing that might be done—perhaps, it was first carried into effect by a man whose merit was far greater than his fame. His teacher, the great Hunter, had suggested it in his hearing; and after his return to Kentucky, McDowell had the courage to attempt what others had only thought of. Three out of four lives did he save before he wrote an account of what he had done; and his modest statement was received with the utmost scorn and contempt by the then leading journal of the world.

Without knowing of Dr. McDowell's case, Dr. Nathan Smith, in 1821, performed an ovariotomy, and thus, although anticipated, may claim an equal originality.

I shall not detain you over the history of this operation during the next thirty-five years, but will merely say that the admirable account of it given by the late Dr. Peaslee will well repay careful perusal. At about the end of this period, in 1857, the subject was brought up for discussion in the French Academy, and the following eminent names may be found among those of the most determined opponents of the practice: Boyer, Velpeau, Huguier, Moreau, Jobert, Malgaigne, and Cruveilhier. One only, Cazeaux, spoke of it as perhaps sometimes justifiable. The statistics at this time stood: in America, 97 operations, 54 successes; England, 123 operations, 71 successes; Germany, 47 operations, 13 successes.

One more statement: When one of the leading British ovariotomists, Mr. Spencer Wells, was knighted, a year or two since, he was complimented upon having added an aggregate of twenty thousand years to the lives of British women. I need hardly comment upon the facts now mentioned; but it seems to me that Ephraim McDowell, in the little town of Danville, in Kentucky, took a step in 1809 which entitled him for all time to rank among leaders in surgery; and if "Peace hath her victories, no less renowned than War," I think he may be assigned a place above many of those who have gained their laurels on the battle-field.

Of some other matters in abdominal surgery, — gastrostomy, cholecystotomy, nephrectomy,—it is as yet too early to judge. They promise, but they have not yet performed.

One great step will probably be taken at some future day in this direction, in the surgical treatment of intestinal obstructions. According to the *British Medical Journal*, July 19, 1884, the first definite and deliberate proposal to open the abdomen in search of an obstruction in the intestine was made by Barbette, in 1672. The first operation of the kind is recorded by Bonetus, in his "Sepulchretum," published in 1677. The first operation performed in England was by Sir B. Brodie, the abdominal cavity being opened in the middle line, for the relief of a hernia of the bowel through a rent in the rectum: it was unsuccessful.

Perhaps the greatest advance ever made in surgery was in the introduction of anæsthesia. The history of this wonderful event has been so often written upon, and so largely discussed, in view of the conflicting claims to its inception, that the mere mention of it is sufficient. It has been said that printing is "the art preser-

vative of all arts," and anæsthesia seems to hold a somewhat analogous position towards the rest of surgery.

Let me mention, as a curious fact, that rectal anæsthesia, generally considered one of the most recent of surgical expedients, was really proposed about forty years ago, and by no less an authority than Pirogoff. Although known to Roux in Paris, and experimented upon by other surgeons, the method was not long employed even by its inventor, although he occasionally continued to use it in allaying nephritic colic.

I would refer to what seems to be a great advance now in progress in the surgery of the chest, in the treatment of various affections of the lungs and pleura by surgical operation. This has the usual history. Krönlein states that in 1812 Richter asked, "Why should not lung-abscesses be opened externally?" and said that it had been done successfully by Benjamin Bell. Such was indeed the fact, and again an American was well up towards the front, for in 1823 Milton Antony published, in the *Philadelphia Journal of the Medical and Physical Sciences*, a case in which he removed, along with a diseased rib, a large portion of lung-tissue which was involved. Krönlein's case was that of a girl with a recurrent sarcoma, in which a zone of healthy lung-tissue was removed along with the growth, by means of scissors. The wound in the lung was united with catgut sutures, and in one month the patient was dismissed cured.

I must not omit to mention the great advance in the surgery of the genito-urinary organs in the development of lithotrity, the merit of which was practically due to Civiale, or the almost equally great step made by our countryman, Dr. Bigelow, in showing the tolerance of the bladder, and experimentally proving that a stone may be crushed and removed at one sitting.

In special departments of surgery there have been some great advances made to which I can but allude, such as iridectomy, the use of the ophthalmoscope, and the correction of disorders of accommodation in the eye. The laryngoscope, and the means of removal of tumors in the air-passages, are instances of such improvements. But, valuable and important as they are, they belong so entirely to special departments that I cannot dwell upon them.

Perhaps some of you, gentlemen, will wonder why I have not spoken of antiseptic surgery, so called, as a vast advance upon all that preceded it. Others possibly will think that it need not have been mentioned at all. And it is precisely for this reason that I have left it to the last. It is still *sub judice*. Its able author and advocate has certainly shown the value of cleanliness, absolute as well as apparent. He has won over a very large and enthusiastic following to his peculiar views. Yet it remains to be seen whether the objects to be sought for, and claimed to be thus secured, may not be more effectually attained in other ways. The doubt thus expressed involves not only the method, but also the principle upon which it is based; and the time has not yet arrived for deciding the question.

I had intended, but time fails me, to speak not only of the great advances actually made in surgery, but of those also which have seemed to be such, but which have failed to stand the test of experience. Among these the most notable instances are acupressure, torsion of arteries (really of ancient date), syphilization, and *écrasement linéaire*. We are prone to judge hastily, to think we have found gold-bearing ore when the supposed prize turns out to be but spurious and fit only to be thrown away. Only very rarely is the precious metal found in ingots on the surface; generally it must be acquired by hard labor, and sometimes it is passed over unrecognized even by earnest seekers.

To one entering upon the study of medicine, the vast field which opens before him is apt to be bewildering. Yet as he becomes more familiar with it he grows more confident, until it seems to him that he has only to march in and occupy the land. To his ardent gaze, the problems which have puzzled the wisest heads and baffled the deepest research seem but to await solution. The untried energy burns to scale the heights, to triumph over the obstacles, to make the crooked straight, and the rough places plain. How different the scene as it is closely approached! and when, as this evening, we look back and see how few have been those triumphant advances, how slowly and with what difficulty they were effected,—difficulty not always inherent in the task, but born of envy or ignorance,—we cannot but wonder that there still exists such enthusiasm.

Yet enthusiasm is not the best of the forces for maintaining our onward struggle; and there takes its place, as one moves on, the sober conviction of the genuineness of certain principles, the love of science which is engendered by faithful work for it, and verily we may say that the last state of that man is better than the first. We "learn to labor and to wait,"—to do our duty as best we may, trusting to the future for our reward.

Mr. President, I cannot conclude without some reference to the memory of one who has gone from among us, whose noble presence and genial influence have often graced our meetings. With untiring energy his comprehensive mind was always gathering up whatever of new truth might be added to the common stock. He preserved in a most unusual degree the receptive spirit which is in accord with all progressive movement, and closed his long and useful career almost in the very act of presenting to the American Surgical Association a communication on an important subject.

I am sure that the recollection of our founder's influence, of his venerable face and form, will be ever cherished by those of us who have had the privilege of intimate contact with him, as incentives to earnest labor in the cause of surgical science, which was so dear to his heart.

ORIGINAL COMMUNICATIONS.

INVERSE TYPE OF TEMPERATURE IN TYPHOID FEVER, WITH A REPORT OF TWO CASES; TEMPERATURE-PECULIARITIES IN EPIDEMICS, WITH A REPORT OF SEVEN CASES IN ONE FAMILY.

Read before the Philadelphia County Medical Society, November 26, 1884,

BY W. C. HOLLOPETER, M.D.

THE classical investigations of Wunderlich, Thierfelder, and Traube have done much to simplify the study of fever, and by their deductions they have rendered it possible for us to differentiate typhoid from all the other continued fevers by its temperature alone. This universal tendency to refer a given symptom to an established, or partially-established, law has done much to lessen the interest of individual work; for those cases marking the exception are, as a rule, looked upon as complications, and slight causes are frequently brought forward to explain the apparent departure from the established rule. Dr. J. C. Wilson, in his admirably-written work on "The Continued Fevers," tells us that "marked deviations from the typical course of the temperature are always due to special causes. These causes, in many cases, cannot be discovered by the most searching investigation. On the other hand, upon inquiry, clinical facts of importance are often discovered, and it is therefore the duty of the physician, in every case when marked deviations occur, to make diligent search for their cause."

I enunciate a well-recognized fact when I state that every physician in general practice has had cases of typhoid fever where the temperature-record has been irregular, when, at the morning or the evening visits, the thermometer has registered the same, or has shown some unusual features in the evening exacerbation or morning remission, departing in some unsatisfactory manner from the gracefully-arched curve of Wunderlich.

It has frequently been my lot to treat cases of fever having every symptom of typhoid, yet not responding to the well-marked type of temperature as described by Wunderlich. For a long time it was very difficult to assign any cause for the variation, although it is natural for complications to disturb the rule, especially when we anticipate a typical curve in the temperature-chart.

Dr. Wm. Pepper has stated, in a recent clinical lecture, that "it was the exception, and not the rule, to find a typical case of typhoid fever." Although every symptom may be uncertain, or even frequently wanting, in some cases of typhoid fever, yet I believe the temperature, the peculiar form especially, remains the most constant factor, and, as Griesinger states it, "generally controls the situation."

During the last seven months I have had under my care a case of typhoid fever in which the temperature-record corresponded to the "inverse type," as described by Traube.

Bäumler, in drawing attention to this unusual character of the temperature, states that, in the great majority of cases, the daily fluctuations follow the rule of health, the exacerbation taking place in

the evening. We sometimes meet with cases where this order is reversed, the rise taking place in the morning and the remission occurring in the evening.

This "inverse type"—so named by Traube—of the daily fluctuations of a febrile temperature has been observed in some rare instances in typhoid fever.

I have been unable to find any additional reference to this unusual type of temperature in the systematic treatises on fever. Liebermeister and Murchison do not mention it in their works, nor have I been able to find any clinical reports bearing on the subject in any of the medical journals.

The clinical notes of my case are as follows:

Frank M., aged 14, of thoroughly healthy parents, was taken ill May 15, 1884. My friend Dr. Schoales, being the family physician, was sent for. The doctor was indisposed at the time, and I was requested to take charge of the patient. I found that the boy had been sick for two days, a slight chill occurring three days previous, and ever since he had been feverish, restless, and stupid; he had refused food and complained of headache; he had also slight nose-bleed and loose bowels. The history of the case was not unusual, having every well-marked typhoid symptom, and was of interest in the character of the temperature alone, which was as follows:

	A.M.	P.M.	Pulse.
May 15 . .	102⅘°	102°	100
" 16 . .	104	103⅖	108
" 17 . .	103½	103	108
" 18 . .	103⅘	102⅖	112
" 19 . .	105⅖	104	116
" 20 . .	104⅗	101⅖	96
" 21 . .	103⅗	102⅘	108
" 22 . .	100	102⅕	96
" 23 . .	99⅘	99	96
" 24 . .	100⅘	100	96
" 25 . .	101⅗	101	96
" 26 . .	101⅘	101	100
" 27 . .	98⅘	99⅕	100
" 28 . .	100	99⅖	100
" 29 . .	100⅕	99	100
" 30 . .	101⅗	99	98
" 31 . .	101	97⅖	98
June 1 . .	100⅘	99	100
" 2 . .	98	98⅖	98
" 3 . .	98⅖	97⅖	98

In this case the boy had been complaining for a few days, according to the statement of the parents, before advice was called in. How much longer he had been ill we are unable to state, but, judging from the elevation of the first temperature (102⅘°), the case was evidently well on in the first week.

The exacerbation recurring so regularly in the morning, and the remission taking place as faithfully in the evening, caused me to watch the case with unusual vigilance. We could hardly be mistaken in the character of the fever,—Dr. Schoales subsequently visiting the case with me frequently and corroborating the diagnosis. The stupid and listless countenance; the distended and tympanitic abdomen; the rose-colored spots, few, but constant throughout the illness; the gurgling in the lower portion of the abdomen; the loose bowels; the nose-bleed; the deafness,—all conjoined to render the diagnosis certain. Then the duration of the illness, while not very severe, extended over four weeks, which corresponds to the average duration of uncomplicated typhoid fever.

The treatment of the case was such as to have but little effect on the temperature, except to lower it: diet exclusively of milk and milk food; the recumbent position faithfully maintained; large and well-ventilated room, thoroughly disinfected. No drug was used likely to influence the fever, with the exception that, during the prevalence of the highest records, thirty grains of quiniæ sulphatis were exhibited in ten-grain doses, two hours apart, during the night. This was ordered on three successive evening visits. Cold-water sponging of the body was continued frequently as long as the temperature remained above 102°. We were unable to discover any complications whatever; in fact, there were none,—no bronchial irritation, no disturbance of the alimentary tract. The course of the fever was so uniformly regular, the various symptoms occurring in their usual order, and the whole phenomena of the fever convincing as to its character, except the very important factor noticed in the *inverse type* of temperature.

The want of uniformity in the temperature-record of the case just noticed recalls the facts in a patient I had under my care nearly three years ago. The clinical notes recorded on the back of my temperature-sheet at the time are briefly as follows:

Walter, æt. 7, was a well-developed boy, and the youngest in an exceedingly healthy family. The mother informed me that the boy had commenced to manifest a disinclination for food and play five days before any trouble was suspected. I was therefore called in on the evening of the fifth day. I found the little fellow quite delirious, with a temperature of 103⅖°, a full pulse of 130, respirations 26, face flushed and apparently swollen, eyes congested, skin dry and hot, bowels confined. Ordered a fever-mixture.

In the morning temperature had fallen to 100⅕°, pulse 100. The patient had relapsed into a quiet sleep during the early morning hours. The skin had become moist. On a more careful examination I found the abdo-

men tender, somewhat tympanitic, and distended. The mother stated that there had been during the past ten days occasionally slight nose-bleed. The bowels showed a disposition to be free, yet, while not constipated, they had not been open regularly every day; now one or more free movements occurred daily. The third day, end probably of first week, if not more, the temperature, with a single exception, did not go above 102°, but had a gradual decline. The interesting feature was the morning record, which was higher than the evening. This unusual feature continued for twelve days. The amount of variation was from one to one and a half degrees.

On the twelfth day, about the twentieth of the attack, the morning temperature reached 103° without any other unusual symptom, after which it changed and ran as a typical case of typhoid fever in convalescence: morning 100°, evening 102°; morning 98⅘°, evening 101⅖°, etc.

The downward curve was thus continuing uninterruptedly until the seventeenth day, when the temperature ran up to 102° again; following this rise the morning record marked 98°, and an intestinal hemorrhage of over four ounces of dark blood following an unusually large fæcal movement.

The thermometer never registered a temperature after this above 100°. The case made a good recovery, convalescence slow. In this case we had a temperature-curve closely following an ordinary typhoid-fever chart, with the unusual exception of the twelve days of *inverse type*, with no discoverable complications to explain the cause.

I have not deemed it expedient to enter into an accurate analysis of each and every symptom of the foregoing irregular cases, knowing it to be exceedingly burdensome, yet I hope that I have sufficiently outlined the general features of typhoid, the phenomena of which are so constant as to make a diagnosis practically certain.

I wish now to present the salient points in a group of seven cases occurring in the form of an epidemic in one family, in which the victims followed each other to bed in rapid succession, four of whom suffered very severe and prolonged relapses. All, however, eventually made a good recovery. It is not my intention to narrate these cases as especially unique or exceptional, but as taking place under one roof and springing from one well-recognized cause: the variation in the temperature-record alone became an interesting element of study.

The fever occurred in a very healthy German family; the parents as well as the children were free from any predisposing weakness.

Case I.—Mary, æt. 13, was the first to take sick. I made my first visit to her December 6, when I obtained the following history. The patient had been complaining for nearly a week of weariness, chilliness, aching in limbs, back, and head, loss of appetite, and a general disinclination to any physical exertion. I found her at 12 M. with a temperature of 104⅘°, pulse 112, skin hot and dry, puffiness around the eyes, with an injected conjunctiva, face dark and flushed. During the day had diarrhœa with vomiting. At 8 P.M. of same day vomiting (continuing) of thick, tenacious mucus, tinged with blood and bile; bowels were opened seven times during the afternoon. Since my morning visit the girl has had low muttering delirium, but can be aroused by speaking in a loud voice. The backache was so very severe as to merit especial mention, it being more pronounced than is usually found in bad cases of typhoid. The girl constantly complained of it during the first ten days. On the same evening, at 9 P.M., the thermometer had registered 105⅘°. In the morning it was 104⅘°, in the evening it was 105°. During the day and night vomiting and purging continued nearly hourly,—fifteen times by the nurse's report.

At the end of the eighth day, the second day of my visiting, the backache continued violently, the hands being involuntarily placed in that region. Bowels continued loose, vomiting the same. Distention and tenderness of the abdomen decidedly marked, with gurgling in right iliac fossa, tongue heavily coated, dark, and foul, sordes on teeth and lips. Vomiting discontinued on third day after taking her bed. Temperature 104⅘° in the morning, 105° in the evening; low muttering delirium, alternating with violent outbursts; three or four well-defined rose-colored spots at this date made their appearance on the abdomen. After the fourth day, probably the tenth or twelfth day of her sickness, the temperature did not run higher than 104⅗°, but did not fall below 102° until the eighteenth day. One very noticeable feature in this severe case was that, for two weeks, every other morning's fall was less or intermittent in character, while the evening exacerbation remained the same. During this period there existed the wildest delirium, it being difficult at times to retain her in bed; bowels frequently moved involuntarily. The girl gained her strength very slowly; it was five weeks before the temperature approached normal, and it was ten weeks before she was able to leave her bed. She, however, made a good recovery.

The point worthy of attention is that the temperature in this nearly fatal case

remained nearly the same for the morning and the evening record. Immermann tells us that only in cases in which the fever is very severe and the absolute temperature very high is the difference less, and does not exceed three-fourths of a degree.

Case II.—The second member of the family to fall ill was the mother, æt. 32, who had acted as constant nurse to the daughter. It was thirty-four days after the daughter was taken sick, and while the daughter was yet in bed, that the mother was compelled to relinquish her duties. I might state that the mother was on the eve of her confinement, that she watched and waited on her sick child up to the hour of her illness; she passed safely through her labor, remained in bed one week, was up and around the house for *five days* before she had any decided symptoms of fever. She had a slight chill, which was soon followed by a temperature of 104⅗° in the evening. This was, however, the highest point reached. She had no delirium nor vomiting. Bowels were opened daily, but not unnatural. The temperature remained high for over one week, ranging between 103° and 104½°. It had a gradual decline for over thirty-six days, when it reached normal, without any unusual variations between the morning and evening record. Convalescence was very slow. The record was a typical temperature-record from the second week of typhoid, yet much milder than the child. The puerperal state did not seem to modify the course of the fever or endanger the life of the patient.

Case III.—The husband and father, æt. 36, a house-carpenter by trade, rugged and compactly-built German, was next on the list. He was a perfect type of physical perfection. He continued his work up to the hour of taking his bed, February 10. He had complained of a cold, headache, and sore throat for two days previously. I found him on the morning of the 10th with a temperature of 105⅗°, pulse 90, respirations 20; dry, hot skin, dark and injected countenance; bowels loose, abdomen flat; very stupid and sleepy. In this case the pulse was full and regular, never going above 90, yet for over two weeks his temperature lingered around 105°, with profound stupor alternating in the wildest delirium. He had during the second week constant *subsultus tendinum* and frequent involuntary movement of the bowels. On the twenty-second day of his illness he suffered a hemorrhage of fully eight ounces. He had several smaller hemorrhages previous to this date. On the sixteenth day his temperature fell to 101⅕°, remaining under 102° with but one exception, when it ran up to 103°. Temperature did not reach normal until the thirty-eighth day.

Case IV.—Caroline, æt. 5, was taken ill on January 13, three days after her mother. She started with a temperature of 104⅘°. She had been listless and stupid for a week preceding her complete prostration; during the prodromata I registered her temperature twice daily, but did not find the thermometer above 100°. Two days from the last date the fever had reached 105⅖°. From this point on it was a gradual decline for twelve days, when it as gradually climbed up to its old figure of 105⅖°. This intermitting type continued for forty-two days, when it fell below 100° and I ceased to make a record. The case was one of unusual severity, frequently losing large quantities of blood by the bowel, yet constipation was the rule throughout the illness. Epistaxis was also constant, the face being stained daily with blood; low delirium existed for over two weeks. The patient was in bed for over seven weeks.

Case V.—Katie, æt. 10, had a temperature-record of her own,—a marked difference existing in this case from the others: above 104⅖° to start with, reaching 105° the same evening, remaining above 104° for *three days*, then gradually declining for three days, when it assumed again the upward tendency, holding it for three days, then came a rapid fall. This intermittent character in the temperature continued for thirty-two days. This case was obstinately constipated throughout her illness, and was but slightly delirious. Recovery slow. Six weeks in bed.

Case VI.—Pauline, æt. 14, an unusually well developed girl, and the last case which I deem of sufficient interest to record in the history of this family-epidemic, will also illustrate a different phase in temperature-irregularities. Three of the children before they became actually sick were noticed to have a weary, listless expression, did not manifest interest in their play, showed a decided preference for the house, which was contrary to their usual habits.

I registered the temperature of two of the younger children for a week or more before they were stricken down, and I did not find an elevation of temperature but slightly above normal unless the temperature was taken in the evening, when it was generally near 100°. Taking into consideration the daily fluctuation in health, which is always higher in the evening, I could scarcely draw the line between the normal evening elevation in health and the insidious approach of the fever. With Pauline I still endeavored to anticipate the onset of the disease. Acting on the suggestion of some of my professional friends, I commenced to register her temperature nearly two weeks before I perceived any indications of her being the next to fall sick. I might anticipate any theoretical conclusions likely to find lodgment in your minds as to the

causation by stating that the girl had been employed in a dry-goods store, and was brought home to take charge of the sick family. Upon her devolved most of the washing and cooking for the sick. While the younger children were out of the house nearly all day at play, she was busy with household duties, and was in this way more exposed to the infectious disease than her younger sisters, who seemed to contract it so readily. I found it most convenient to take her temperature at the time I visited the other members of the family,—*i.e.*, between nine and eleven in the morning and eight and nine in the evening. I never found her temperature above normal until within four days before she was compelled to take to her bed. Three days before her prostration the thermometer registered 102°, normal the following day; second day it was 101⅘°; the following day it ran up until it reached 104⅖°. Her temperature continued high for over ten days, ranging from 103° to 105°, then assumed the intermitting character so frequently noticed in the record of the other members of this family, after which the fever-record had a gradual decline. By anticipating her attack of the fever and registering her temperature for over a week, three days in which her fever was above normal, gave us part of the ascending scale of Wunderlich, yet does not supply the gradual ascent and the lengthened arc of the semicircle which should describe the model typhoid temperature-record.

I have hinted that the cause of this epidemic had a tangible existence. While it is not the object of this paper to touch upon the etiology of typhoid, yet it may not be without interest to mention the environments of this fated household. It is unusual to have seven cases of typhoid occur in one family and follow each other in such rapid succession: yet not until the third member of the family was prostrated could an adequate cause be found.

The head of the family was an industrious carpenter, who resided, with his wife and five children (two older girls were not living at home), in a two-storied, four-roomed house near Thirteenth and Columbia Avenue. The house was quite comfortable for a small family, but not so for this one: hence they were crowded. Yet I have seen families packed in and live free from disease when there have been actually more to a room than in this family. The cellar was dry, drainage in a fair condition. A vacant lot of enclosed ground intervened between our family and the nearest neighbor on the north. This neighbor on the north was in the milk-business, and for his convenience he had excavated a pit in the vacant lot adjoining our family's cellar-wall, four feet deep, into which he had dumped the rubbish of the yard. The rain and snow falling upon the decomposing mass of organic material soon found its way through the intervening stone wall,—percolated its liquid poison into the cellar. This filth, while not at all times sufficient to be recognized by the sight, was more frequently perceptible to the sense of smell. The pit could in no way impregnate the drinking-water of the family, for as a precaution I had all the water that was consumed for that purpose brought to them from a distant neighbor.

While we have mentioned the exceptional in the temperature-record, we may also entertain a doubt of this rubbish-pit being the only factor in the family illness. The first case in the epidemic, Mary, æt. 13, was employed in a store; hence she was not in the atmosphere of the house as long as the mother, who was the only one who constantly lived in the poisoned house and yet second on the list, and, while she had a severe attack, her illness was not so prolonged as the first. Again, Pauline, the eldest girl, came from another family in perfect health, resided for three months in the infected house, exposed to every form of contagion, and was the last to succumb to the disease; and when finally she was prostrated, the fever ran a comparatively mild course.

In directing your attention especially to the peculiarities of temperature in the foregoing cases, that ended in recovery, I wish now to contrast them with one that, while the temperature was under control and lower than any of the foregoing, yet, without complications, ended fatally.

A finely-built young man of 27, regular, but rather full habit, first complained August 1 of intense headache, backache, indifferent appetite, and general disinclination to exertion. He left the city, against the wishes of friends and my advice, for a trip through the South. On the 3d he was taken violently sick; sent home, reaching the city August 4. At my first visit, same day at 12 M., temperature was 104°; at 8 P.M., 104⅖°. On the sixth day he lost consciousness. His delirium was wild and pugnacious; constant mutterings. At the same time his temperature fell below 104°, and remained below for over a week. On the tenth day his temperature reached 104⅗°. From this point it fell, and remained

under 103° until the fifteenth day, when it ran up to 104⅗° at death.

It is unusual to find patients unconscious when the temperature is so easily under control. In this patient the only antipyretic measure used was the cold bath. None of the symptoms of this case were as severe as the group occurring in the epidemic; yet this case terminated in death, while all of the others, indifferently nursed and badly surrounded, made good recoveries.

While it has been my principal object to record these cases of typhoid as departing in a measure from the temperature-law of Wunderlich, I wish to call your attention incidentally to the following facts:

1st. Six of the group of cases noticed in this paper were children, yet we had a severe course of the fever and the temperature-record commenced high, showing frequent irregularities. Wunderlich states that in children, particularly in the younger subjects, the course of typhoidal temperature is somewhat irregular. The commonest of these irregularities is its extreme mildness; yet the temperature rises in the first days to a higher average than in adults; it passes more quickly into the remitting period, and defervescence is less protracted, but complications often occur, closely indicated by the temperature.

2d. In the nine cases of typhoid, including mild as well as severe examples, we had four cases of intestinal hemorrhage, an unusually large percentage. Systematic writers on fever regard intestinal hemorrhage as a rare and grave symptom. While Liebermeister states that there is not a single symptom belonging to typhoid which can be characterized as pathognomonic, yet a tendency to diarrhœa is quite frequent and intestinal hemorrhage quite rare. In our cases we found the bowels confined in over half of the cases.

Dr. Broadbent looks upon constipation in typhoid as of sufficient importance to entitle the fever a distinct variety.

1408 North Thirteenth Street.

Absence of Tendon Reflexes in Diabetes.—Professor Bouchard considers this phenomenon of great importance in the prognosis of saccharine diabetes. In forty-seven cases of diabetes in which the tendon reflex persisted there were only two deaths, or one in twenty-three; in nineteen cases with absence of the reflex there were six deaths, or one in three.—*Canadian Practitioner.*

REMARKS UPON THE MANAGEMENT OF LABOR.

Read at the Philadelphia Clinical Society, Nov. 28, 1884,

BY EDWARD R. STONE, M.D.

THE remarks which I have to offer this evening are based upon one hundred cases of obstetrics attended in private practice. This number is quite too small for the deduction of any accurate statistics, and they will therefore be used simply to illustrate certain points in the management of labor. The practice of obstetrics forms a large and important part of the every-day duties of most of us, and it is well occasionally to leave the discussion of rare and difficult cases to review the common things of our art. For these reasons you will excuse the following desultory remarks, which, while they contain nothing new, may serve to introduce profitable discussion. In the beginning, let me emphasize the importance of intelligent supervision of our cases as early in pregnancy as possible, which is apt to be neglected in the exigencies of other and more pressing duties.

It is not my purpose to discuss the details of the hygiene of pregnancy, or its various complications, except to bear testimony that in primiparæ great benefit follows preparatory treatment of defective and retracted nipples. We are all painfully aware of the not uncommon sequence of imperfect and ulcerated nipples, enlarged breasts, and mammary abscess, and the books and journals direct many and various plans of treatment, the very number of which is sufficient to indicate their untrustworthiness. The primary cause of trouble is almost always that the nipples are not in condition to fulfil their function, and efforts to continue lactation make a cure very difficult. At first I was timid about disturbing the nipples during pregnancy, knowing the marked sympathy between the uterus and mammary glands, but after some experience I have always found that the pregnancy progressed without accident. In cases in which the nipples are small and retracted it is well, for several weeks before labor, to direct systematic efforts to develop them. This may be done by gentle manipulations with the hand and suction by means of a glass connected with the woman's mouth by a rubber tube (one of the common kinds of breast-pump, such as is found in every

drug-store). At the same time the cuticle should be hardened with a solution of tannin and glycerin. Other astringents are recommended, as tea, brandy, or cologne-water, but all act in a similar way. Dr. Samuel Sloan, of Glasgow, suggests that glycerin and lead should be used with the astringent, to toughen as well as harden the skin. In the interval, pressure of the clothing should be removed by wearing a nipple-shield. In my experience, depressed nipples have usually been observed in girls of stout physique whose corsets and other clothing are made to fit tightly over the breasts.* If the physician has directed that he must be called as soon as labor-pains set in, he will be able satisfactorily to practise external examination. Later on in labor, the frequently-recurring contractions will interfere with its proper fulfilment. Lusk says† "that it is a good plan to employ external palpation in every case where no opposition is made, as, even where the diagnosis by ordinary vaginal exploration is clear and indisputable, no opportunity should be lost of perfecting one's self in mapping out the fœtus through the abdominal and uterine walls. The ability not only to recognize the presenting part, but the position of the entire fœtus in the uterine cavity, is, in many cases of difficult labor, a possession of priceless value." By palpation and auscultation can be ascertained—1. The fact of pregnancy. 2. The vitality of the fœtus. 3. The probable position of the same in utero. 4. The suspicion, at least, of multiple pregnancy. By patient, firm, but gentle pressure with the hands laid flat on the abdomen, the parts of the fœtus can usually be made out with considerable accuracy. The head can be readily detected as a hard, round body, usually at the pelvic brim, while the firm resistance of the back on one side is quite different from the irregular prominences of the extremities on the other. The point of maximum intensity of the fœtal heart-sounds, which is always nearest the thorax, serves to confirm the diagnosis of position made by auscultation. In the fourth position of the vertex I have several times been able to note the unusual prominence of the extremities, and the heart-sounds far around to the right side of the mother. A case which occurred some years ago, and in which Dr. J. B. Walker was called to my assistance, well illustrates the disastrous result of not recognizing a twin-pregnancy, which might have been done if external diagnosis had been practised.

Mrs. M., a slender Irishwoman, of medium height, æt. 38, was taken in labor at the termination of the sixth pregnancy. Nothing unusual was noticed, except that the uterus was very prominent. No external examination was made. The presentation was the vertex in the first position, and the cervix was soft and dilatable, the os about two-thirds dilated. The pains, however, were weak and ineffective. After waiting about two hours without much progress, I desired to use the forceps, but was not permitted to do so. Thinking that it was a proper case for the use of ergot as a uterine stimulant, two small doses were given with an interval of half an hour. The pains then became efficient, and a male child of rather small size (six and a half pounds) was expelled. As the birth was taking place it was ascertained that the womb contained another fœtus, whose head could be felt in the right iliac fossa, and under the ergotized contractions the shoulder was forced down in spite of efforts to prevent it. The uterus continued to act violently, and the fœtus perished before an anæsthetic could be administered for the purpose of version. As we were preparing for that operation, the fœtus was suddenly delivered, probably by a process of spontaneous version.

This case reflects no credit upon the practitioner, but is none the less instructive, not only as showing the importance of using every means of diagnosis at our command in every case, but also as pointing a moral in regard to ergot, which has since deterred me from its use in similar circumstances. It is admitted that the diagnosis of twins before the birth of the first is difficult, and in some cases impossible, but in this case a careful examination would, I am sure, have disclosed enough to save me from the fatal error of administering ergot and thereby destroying the life of the second fœtus.

This was the only case of multiple pregnancy which I have met with, and I have not therefore had an opportunity of testing the value of external diagnosis. The points in diagnosis of twin-pregnancy, as

* One may well wonder, also, whether the pernicious habit of ignorant nurses of rudely squeezing the breasts of newborn female infants may not have a bad effect upon the future usefulness of the glands. In two cases I have seen abscess result from this barbarous practice, and it is reasonable to suppose that the results of such abuse may leave the gland in a permanently crippled condition. If the mammary glands of an infant become swollen, it is well to forestall malpractice by covering them with small belladonna plasters, which will also allow nature to remove the trifling difficulty.

† Op. cit., p. 203.

given by Cazeaux, Lusk, Playfair, and others, are unusual size of abdominal tumor, a longitudinal depression in the median line, the detection of duplicate heads and other parts, and heart-sounds at two remote points of intensity. The difficulties in the way of external diagnosis are obesity of the mother, excess of the amniotic fluid, and contraction of the abdominal muscles due to the nervousness or timidity of the patient. The last, however, may be overcome with patience and tact on the part of the physician.

In the first stage of labor, the ordinary difficulty, in primiparæ at least, is from a lack of the proper dilatability of the cervix, the degree of rigidity varying from a mere temporary retardation of labor to those difficult cases which are only overcome by mechanical dilatation. In my cases, which show a rather large percentage of primiparæ (thirty per cent.), there were several requiring assistance, but none of a serious character. At first careful and systematic trial was made of the warm-water douche, but the results were disappointing, as it only washed away the secretions which nature throws out to lubricate the parts, and had no marked effect in relaxing the os. Chloral given in fifteen-grain doses until three or four doses were taken had, however, a most happy effect, especially where the rigidity was associated with marked suffering in an oversensitive cervix. In two cases, after the ordinary means had failed and the patient's nervous system was suffering from protracted anguish, a full dose of morphia hypodermically caused a temporary cessation of labor, which, after a refreshing sleep, was resumed and successfully terminated. In four cases, however, laceration of the cervix occurred sufficient to cause the usual symptoms subsequently. There may have been others, but these were all which were brought to my notice. Examination of some of these cases of imperfect dilatation has led me to believe that the maximum limit of normal expansion of the os may be insufficient to allow the head to pass, when a laceration is unavoidable, just as the vulvar orifice may be too small to give exit to the head without injury.

The proper management of the perineum occupies the anxious care of all obstetricians, and it seems that, even with the best-known methods, we have yet much to learn. It is well that the old plan of pressure with a folded napkin is about obsolete, as it was erroneous in theory, and useless, if not harmful, in practice. The method of Professor Goodell accomplishes perhaps better than any other the three indications,—viz., to retard delivery, to assist extension, and, by drawing forward the perineum, prevent it from suddenly slipping back over the brow. It has seemed to me, however, open to the objection that in some cases the fingers in the rectum increase the tenesmic efforts and compel the patient to bear down more than is proper and safe. After having had a patient draw suddenly away from my hand at a critical period, I have, in some cases, adopted Dr. Jas. D. McGaughey's* plan of assisting extension and retarding delivery with the left hand passed between the woman's thighs from above. This can be done by having the patient on the usual left side near the edge of the bed, with the thighs separated, while the physician sits behind the patient, facing the foot of the bed. It has seemed to me that in this way the advancing head can be easier controlled, and the arm across the woman prevents any sudden and hazardous movements. The right hand is free to draw forward the perineum or to reinforce it in any other way. It has been my misfortune to meet with seven cases of rupture, all primiparæ; six of these were of moderate extent, not involving the sphincter ani. In one case the rent involved the rectum. It was, briefly, as follows:

Mrs. L., æt. 22, primipara, taken in labor about midnight, but was not visited until about 10 A.M. next day. The fœtal head was found to be well down in the cavity of the pelvis, the vertex presenting towards the sacrum. The pains were severe, but nature was evidently unequal to the task. Ether was administered and forceps applied. After considerable effort, delivery was effected by bringing the head into forced flexion. The perineum was torn through the sphincter ani, but primary union followed the introduction of sutures.

There is still diversity of opinion as to what constitutes a laceration calling for the use of sutures, physicians of considerable experience stating that they never had a case requiring other treatment than

* Am. Jour. of Obstetrics, June, 1884.

bandaging the knees together, while others often find use for sutures. The only safe rule is to make a careful examination of the parts, and if the muscular tissues and central tendon of the perineum are divided it is useless, in my opinion, to look for primary union unless the wound is firmly united. The legs may be tied, but the retraction of the transverse perineal muscles will cause the wound to gape.

The proper treatment of the third stage is of the greatest importance, but the history of the subject, unfortunately, teaches that the most diverse plans, from rude and forcible delivery to an expectant plan carried to an almost ridiculous extent, have had their advocates in high places. Not many years ago the teaching was to wait a half-hour, and gently assist nature by drawing on the cord; then came Crédé, with his many disciples of expression, and for several years this method has been the most popular. Quite lately, however, the pendulum of medical opinion has shown signs of swinging back again to less active means. Several have expressed themselves as being dissatisfied with Crédé's plan, because it empties the womb too speedily and is apt to leave behind the membranes to become a source of danger from hemorrhage and septicæmia. These either place themselves in an attitude of "armed neutrality" and wait for nature to accomplish the object, or adopt an intermediate plan which has received the name and sanction of the Dublin school. The latter is described* as following down the uterus with the hand as a sentinel and guard, and, as soon as uterine contractions are pronounced, assisting by firmer pressure.

Professor Stadfelt, of Copenhagen, presented to the late International Congress the results of the respective methods in a large number of cases. His conclusions were that Crédé's method is preferable to the expectant. Detachment and retention of membranes occurred somewhat more frequently after expression, but he thought that the objectors to it attached too much importance to the objections, and overlooked the fact that it removed dangers attendant on the time of waiting in the expectant plan. The cases treated by Crédé's method also showed a less per cent. of mortality and puerperal disease than did those treated expectantly. All will admit that the patient is not safe until the placenta is expelled, which is sufficient ground for its speedy removal, if that can be accomplished safely. In the majority of cases the placenta will be found to be wholly detached very soon after, if not simultaneously with, the expulsion of the fœtus, and can no longer serve any useful purpose, except to provoke uterine contractions to expel it. If the uterus has been followed down with the hand, there does not seem to be any good reason for not removing it as soon as the contractions are resumed and the blood in the uterine sinuses has had time to coagulate.

Dr. J. C. Reeve, in an historical and critical article upon the management of the placenta, expresses the opinion that Crédé wrote his own condemnation with the statement that in his practice the average duration of the third stage was only ten minutes. But it should not be forgotten that Crédé advised that the placenta should not be expressed until the uterine contractions are re-established, and this appears to me to do away with the objection that the method empties the womb too speedily.

It has been my custom to keep the hand upon the uterus from the time of the delivery of the shoulders until the third stage is completed, and for several minutes after, and as soon as a firm contraction is felt to remove the placenta by pressing and compressing the uterus with the left hand, while two fingers of the right hand are hooked into the edge of the after-birth which is usually protruding from the os, making traction and twisting up the membranes as soon as the placenta is brought outside of the vulva. Thus the left hand is assisted in the extraction, and the membranes are not liable to become detached, as sometimes happens with unassisted expression. I have been in the habit of administering a full dose of ergot as the head is emerging, in all cases other than primiparæ. This practice is condemned by Lusk, Playfair, and others, on the ground that the contractions produced by the drug may imprison the placenta and lead to difficulty in its removal. This objection no doubt applies to those cases in which ergot is administered and the expectant plan pursued, but not if the after-birth is removed as soon as the pains are re-established. We are told by Playfair, and Wood in his Therapeutics, that the drug requires fifteen to

* Med. News, Oct. 4, 1884.

twenty minutes in which to act, which gives ample time for its removal by Crédé's method or some modification of it. It is this tardiness of action which has influenced me in administering it early to forestall a possible flooding, for the patient may die exsanguine before the ecbolic action of the drug can be secured. In my cases there was neither a single case of hemorrhage from inertia nor imprisonment of the placenta. Those who object to giving ergot before the completion of the third stage should be prepared to administer it hypodermically if symptoms of inertia come on.

The administration of ergot also has a favorable effect on the after-pains, by keeping the womb contracted, and gives the latter a start towards healthy involution.

The use of anæsthetics in obstetric practice is, perhaps, not as common in this country as it should be. This may be partly due to the national antipathy to chloroform, and the fact that ether is bulky, disagreeable, and liable to cause intoxication, during which the patient is difficult to control. Last winter Dr. E. E. Montgomery suggested to me the use of bromide of ethyl, and I have since administered it in eight cases, always with the very best results. The remedy certainly deserves a more extended trial, and I would commend its use to those engaged in the practice of obstetrics. Its advantages are—the small amount required to relieve pain; it does not interfere with muscular contractions, either voluntary or of the uterus; it does not seem to have a dangerous effect upon the heart, or to lead afterwards to uterine inertia.

In these days of bacilli and other microscopic germs of disease, obstetrics naturally comes in for its share of antiseptic treatment. The heads of the various great lying-in establishments have given us the details of carbolized hip-baths, removal of hair from the genitals, rubber gloves, antiseptic vaginal and uterine injections, and other means of excluding possible germs of disease, and some have gone so far as to accuse those who do not as they direct of culpable negligence. But it is well to remember that those to whom we look for instruction usually gather their large experience in maternities whose proximity to general hospitals provides a constant and fruitful source of septicæmia. Blockley Hospital is one of these, and I have seen the time when scarcely a single woman delivered in that institution presented a normal puerperal period. But these precautions surely do not apply to private practice, if the practitioner is careful not to be a carrier of the germs of scarlet fever, erysipelas, or other similar disease. In attending considerably more than one hundred cases, I have yet to see a single case of septicæmia, although no other precaution than ordinary cleanliness was observed. In one hundred cases the mortality has been nothing, and the percentage of disease nine per cent. Three of these were mild cellulitis apparently due to lacerated cervix; one was a severe case of the same disease, which progressed to the formation of abscess. Recovery took place slowly, leaving the uterus fixed in the pelvis, but the woman after several months was able to work, and has fair health. The other cases, five in number, were mammary inflammation and abscess. This list does not include, however, abortions, nor deliveries before the fœtus was viable.

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REPORT ON MEDICAL CHEMISTRY.

BY WILLIAM H. GREENE, M.D.

A New Levogyrate Acid in Diabetic Urine, Pseudo-Oxybutyric Acid.—E. Külz and Hass, some time since, have shown that normal human urine rotates the plane of polarized light to the left, and that the left-handed rotation is still more marked with the urine of cattle, horses, and pigs. The rotatory power is diminished after treatment with lead acetate, but increased by lead acetate and ammonia. Külz now finds that in severe cases of diabetes the urine possesses levogyrate properties which remain after treatment with lead acetate and ammonia, and which cannot be attributed to any of the hitherto known constituents of the urine. This he ascribes to an acid having the composition of oxybutyric acid ($C^4H^8O^3$), and which he isolates by the following process. The glucose is first destroyed by fermentation, and the urine concentrated to a small bulk and precipitated with neutral lead acetate and basic lead acetate and ammonia; the filtrate is freed from lead and evaporated to a syrupy con-

sistence. It is then treated with a little ninety-five-per-cent. alcohol, afterwards with absolute alcohol, and allowed to stand twenty-four hours. The clear decanted solution is then mixed with about five times its volume of ether, which precipitates the greater part of the new acid. The barium salt is soluble in alcohol, and may serve for the preparation of other salts which separate from their alcoholic solutions on the addition of ether. Analysis of the salts and of the free acid, which may be obtained in syrupy form by desiccation over sulphuric acid, gave figures corresponding closely with the formula of an oxybutyric acid, but the properties of the new acid do not correspond with those of either of the four known acids having that composition. It produces no color with ferric chloride, and does not volatilize in a current of steam. Külz has named it pseudo-oxybutyric acid, and has demonstrated its existence in the urine of all severe cases of diabetes where the presence of acetylacetic acid occasions the production of a Burgundy-red color on the addition of ferric chloride. The so-called *acetonuria* is possibly accounted for by the presence of this acid, which, according to Külz, yields acetone when oxidized by potassium dichromate and sulphuric acid, and is itself probably a normal oxidation-product of glucose. Also, the presence of this acid would explain the fact that the polarimetric estimation of glucose in urine often gives results considerably lower than those found by the use of Fehling's solution. If, after the fermentation of the glucose, a sample of urine is levogyrate, the reading to the left should be added to that previously found to the right.

O. Minkowski has continued his researches on the presence of oxybutyric acid in the urine of diabetes,* and has succeeded in further purifying the acid and preparing certain of its salts. He has also investigated its optical properties, and finds for the free acid a rotation of $(\alpha)_D = -20.6°$; for the silver salt, $-10.1°$. Külz found for the silver salt of his acid above described $(\alpha)_j = -8.637°$. Throwing aside its optical properties, Minkowski's acid closely resembles β-oxybutyric acid, and this investigator proposes to call it *acetonic acid*. In all respects it corresponds to the pseudo-oxybutyric acid of Külz, and the two are undoubtedly identical.

Minkowski also considers that the acetylacetic acid obtained from urine by Jaksch was probably an oxybutyric acid. However this may be, it appears certain that the substances obtained by Stadelmann, Külz, and Minkowski are identical with each other, and have the composition of an oxybutyric acid, and that this acid is very frequently if not constantly present in the urine in grave cases of diabetes.

Minkowski believes, with Stadelmann, that diabetic coma is due not to the action of any specific basic substance, but to the accumulation of acids in the organism; Walter and Von Frerichs have energetically combated this opinion.

Some New Applications of Weyl's Creatinine Reaction. Acetonuria.—The evanescent red color produced by the addition of solution of sodium nitroferrocyanide and sodium hydrate to solutions containing creatinine is usually known as Weyl's reaction. E. Legal finds that acetone and acetylacetic acid respond to the reagents just as does creatinine, with the difference that the brown-red color fades much more slowly and becomes darker on the addition of acetic acid, while it appears carmine-red when diluted. Diabetic urine which produces a red color with ferric chloride gives the same reaction, but ethyldiacetic acid behaves differently: its solution becomes brown-yellow when treated with the above reagents and acidulated with acetic acid, and is then straw-yellow when diluted. Legal claims to have detected acetone in the distillate of normal urine treated in this manner, and it would follow that, in the application of the test for determining the presence of creatinine, the urine should first be boiled.

C. Le Nobel has independently made an observation similar to the above. He finds that the ruby-red color produced by sodium nitroferrocyanide and strong sodium hydrate in solutions containing acetone is changed to violet by the addition of glacial acetic acid, and becomes green-blue when the solution is boiled or after it has been allowed to stand. Glacial acetic acid changes the color of the creatinine reaction to green. With ammonia and sodium nitroferrocyanide, acetone gives first a rose-red, then a violet or wine color;

* See Medical Times, vol. xiv. page 708, and vol. xv. page 123.

heat deepens the color, and boiling with acid changes it to green-blue.

As additional characters which may assist in the detection of acetone, Le Nobel cites its reaction with tincture of iodine and ammonia; one-ten-thousandth of a milligramme of acetone then betrays its presence by the production of iodoform, while under the same circumstances alcohol gives no results. Also, the one-hundredth of a milligramme of acetone may be detected by its power of dissolving mercuric oxide. In this test a solution of mercuric chloride is precipitated by the addition of alcoholic potassium hydrate, and then agitated with the liquid supposed to contain acetone; the mixture is filtered, and the filtrate tested for mercury with ammonium sulphide. Lead hydrate also dissolves in acetone in the absence of alkaline hydrates.

Ethyldiacetic acid gives no iodoform reaction, and behaves somewhat differently from acetone when subjected to Weyl's reaction. Mercuric oxide and lead hydrate are dissolved by ethyldiacetic acid. This acid distils without decomposition when its solution is boiled, and it is undecomposed by organic and dilute mineral acids; it is, however, decomposed by strong mineral acids, especially by the aid of heat.

Aldehyde simulates creatinine in Weyl's reaction still more closely than either of the other two bodies mentioned.

Le Nobel criticises Von Jaksch's method for the estimation of acetone, and considers that, even if acetone be constantly present in cases of acetonuria, its quantity is quite insignificant, but appears to increase after the ingestion of alcohol or sugar.

Normal urine contains still another substance which gives the iodoform reaction. In fever there is often decided acetonuria, so that acetone can be recognized in the distillate from five hundred cubic centimetres of urine; but the production of acetone is not dependent on the fever intensity, being greater when there is a large amount of indican present. Diabetic coma does not appear to depend on acetonuria, and an increased proportion of acetone in the urine is not to be regarded as an alarming symptom. The red-brown reaction of urine with ferric chloride does not depend on the presence of ethyldiacetic acid, and Le Nobel considers it a doubtful question whether it is always due to acetylacetic acid, as held by Von Jaksch.

It may also be mentioned that Le Nobel claims to have found ethyl alcohol and acetone (possibly ethyl-acetic acid) in the breath exhaled by diabetics.

E. Salkowski reclaims priority for Legal's and Le Nobel's modification of Weyl's reaction, and states that Le Nobel is wrong in asserting that the creatinine reaction does not give a blue color on boiling in the presence of acetic acid.

For the Estimation of Nitrogen in urine and excrements, W. Camerer places the substance to be analyzed in a glass tube sealed with paraffin. This is then inserted in a long combustion-tube with soda lime, and the analysis is conducted in the usual manner. Camerer finds that the nitrogen in fæces must be estimated in fresh material: drying at a temperature of 100°–105° C. occasioned a loss of 0.109 gramme of nitrogen for 100 grammes of fresh fæces, or 8.2 per cent. of the total nitrogen present. The estimation of nitrogen in urine by the hypobromite method gave, in comparison with a similar estimation by combustion with soda lime, a loss of 10.9 per cent.

The Relation between the Elimination of Phosphoric Acid and that of Nitrogen in the Urine during Alimentation by Brain-Substance has been investigated by G. Politis. The proportion of phosphorus in brain-tissue is known to be higher than in other animal tissues, and the author has found in fresh ox-brain 0.81 per cent. of P^2O^5 for 1.69 to 1.78 per cent. of nitrogen. In one experiment a dog was fed on bones for one day, then for three days exclusively on ox-brains, and on the fifth day again on bones. The ratio between the P^2O^5 and nitrogen eliminated in the urine on those days was found to be 1 : 5.02, 3.2, 2.2, 2.0, 2.2, and the curves representing the daily excretion of phosphorus and of nitrogen were sensibly parallel. During an exclusive flesh-diet Feder found a much more rapid elimination of phosphoric acid in the urine, and Politis explains this by the fact that the phosphorus in flesh exists in the form of phosphates, while that in brain-substance is in the form of complex ethers, such as lecithin. The latter is absorbed with difficulty, and during nutrition with brain-substance the author has found it in the

fæces, together with a very small quantity of glycerin-phosphoric acid. Bokay found no lecithin in the fæces during a diet of yolk of egg. In another experiment of Politis a dog was fed exclusively on flesh, and the ratio of the phosphoric anhydride to the nitrogen in the urine was found to be 1 : 6.7; when the diet was fifty parts of brain-substance to one of flesh, both nitrogen and phosphoric acid increased in the urine without the proportion between them sensibly varying: hence the before-observed variations in this proportion cannot with any probability be attributed to the influence of the ingested brain-substance.

It is to be remembered that Gamgee, Paton, Cazeneuve, and Lépine could detect no increase in the elimination of phosphoric acid in the urine after mental work. The diminution in the excretion of phosphoric acid observed by B. Schulze after the internal administration of potassium bromide is due, according to Politis, to a retention of phosphoric acid in the blood, this retention depending on a double decomposition between the potassium bromide and the sodium phosphate.

The Influence of Water on the Estimation of Urea by Liebig's Method. —Luzzatto has again studied the effect of dilution on the final reaction in Liebig's method, which, it is well known, requires for dilute urea solutions a larger quantity of the mercuric nitrate solution, and for concentrated solutions a smaller quantity than normal. As Pflüger had already recommended, Luzzatto, in a recent communication, counsels that the final reaction with sodium carbonate should be made in the entire bulk of liquid, especially when this bulk is small.

Kairin (oxyhydrethylchinolin), according to Petri and Lehmann, occurs as a salt of sulphuric acid in the urine in phthisis. The compound is not destroyed by the ammoniacal fermentation of urine, but is decomposed by long boiling with hydrochloric acid. In dilute acetic acid solution it gives a fuchsin-red color on the addition of a little chlorinated lime solution, but the color appears only in about half an hour. The spectrum of the solution shows an absorption band between D½ E and F. Kairin itself gives, under these circumstances, a different red, which soon changes to dark-brown with a faint violet reflection.

REMOVAL OF UTERUS AND OVARIES BY ABDOMINAL SECTION FOR FIBRO-MYOMATA — DEATH ON TWELFTH DAY, FROM SEPTICÆMIA.

Read before the Philadelphia County Medical Society, December 17, 1884,

BY J. M. BARTON, M.D.

MRS. K., æt. 31 years, was brought to me last September by Dr. M. B. Dwight, of Jersey Shore, Pennsylvania. She was very pale, the face and lips being entirely colorless: indeed, the appearance of the patient suggested the presence of malignant disease. She had been losing more blood at her menstrual periods than she should, for several years, and for several months she had a daily loss, frequently in quite large amounts. She was losing strength rapidly, and had to be carried to her room on her arrival in this city.

On examination, a large, hard, smooth, and freely-movable tumor, evidently the uterus, extending three inches above the umbilicus, was found; by the sound, Dr. Dwight's diagnosis of a submucous fibroid with extensive uterine attachments was readily confirmed.

As the uterus was entirely out of the pelvis, as the attachments of the tumor occupied more than three-fourths of its entire circumference, and as the remaining uterine wall was much thinned, removal by the vagina was plainly impossible. I advised extirpation of the ovaries, if accessible, or of the entire uterus, if, on exploration, it appeared preferable.

The patient returned to her home, as she preferred to have the operation performed there, to which I agreed, as I considered the mountain air much more favorable for operation and after-treatment than the wards of a general hospital.

On September 30 I visited Jersey Shore and removed the growth, assisted by Drs. Dwight and Cline, of that place, Drs. Detweiler and Youngman, of Williamsport, Dr. Armstrong, of Lock Haven, and Dr. Orville Horwitz, of Philadelphia.

Thorough antiseptic precautions were taken: the hands of the operator and assistants were washed in carbolic acid solution; all the instruments and ligatures were immersed in a similar mixture; the sponges were washed in a warm solution of the same acid; the abdomen of the patient was washed first with turpentine,

then with soap and water, and lastly with carbolic acid solution.

I made a vertical incision through the abdominal wall, midway between the umbilicus and pubes, about two and a half inches long, through which I readily drew the right ovary; the left, however, could not be reached. Finding the uterus free from adhesions, we decided to remove it. I increased the incision until it ran nearly from ensiform cartilage to pubes, carefully checking all hemorrhage by forceps and catgut ligatures before opening the peritoneum; the uterus was readily lifted from its bed and placed upright; the left broad ligament was attached posteriorly and the left ovary lay against the spine, showing that it could not have been reached through the original incision. The intestines were held away from the uterus and supported by large flat sponges wrung out of warm carbolic acid solution. The broad ligaments were tied in sections with carbolized silk, and Thomas's large clamp placed upon the neck of the uterus.

Surrounding the parts with sponges to prevent blood from entering the peritoneal cavity, into which so far none had flowed, the uterus and both ovaries were rapidly removed. There being but little tension on the pedicle, we decided to treat it outside.

The stump was trimmed so as to leave but little projecting above the clamp; it was transfixed by a large pin, and was seared on its cut surface by the actual cautery; the wound was closed by the interrupted suture introduced from within in the usual manner. It was not found necessary to make the "toilet of the peritoneum," as, thanks to the care of my assistants, no blood had been allowed to enter that cavity, and, indeed, but little was lost during the entire operation.

The uterus was seven inches in diameter and nearly a sphere; it was occupied by a single fibro-myoma, which was attached to the entire uterine walls, with the exception of a narrow channel about two inches wide, running from neck to fundus. On section, it presented the usual appearance of such growths, except in its centre, where it appeared to have undergone sarcomatous degeneration. This suspicion was subsequently confirmed on microscopical examination.

The after-treatment of the case was in the hands of Dr. Dwight, from whose very complete notes I take the following points:

On the evening of the operation, the temperature rose to 102.5°, the pulse to 120; under opium suppositories and occasional hypodermics of morphia the patient was quite comfortable; she took nothing whatever into the stomach except small quantities of hot water, and had no vomiting.

On the second day the thermometer rose to 104°, the maximum temperature observed.

On the third day she took some barley-water, and in the evening some beef-tea, the general condition being improved and improving still more on the fourth day.

On the fifth day (October 4) the bowels were moved by an enema; opium stopped; beef-tea, brandy, and warm milk were taken freely; the patient was quite comfortable.

On the sixth day (October 5) patient rested well during the night; takes warm milk every three hours; pulse stronger, 120; temperature, 101°. Patient looks quite bright; natural movement of the bowels.

The notes of the seventh, eighth, and ninth days are almost identical with the last one read, except that the stitches were removed, and on the ninth day there was considerable pus coming from the wound, and some swelling of the right parotid gland.

On the tenth day the swelling of the parotid gland increased, there were evidences of systemic poisoning, and on the evening of the eleventh day she died.

At the autopsy, there was no inflammation of intestine; there was no pus found in lungs, liver, or kidneys, though there was some in the abdominal cavity. This had probably entered a day or two before her death, and from it arose the blood-poisoning, which proved fatal.

INDIGO-FORMING SUBSTANCES IN THE URINE.—J. Hoppe-Seyler (*Zeitschrift für Physiol. Chem.*, Band viii.) obtained one gramme of crystallized indican from twenty-five litres of normal dogs' urine, in which it exists in sufficient quantity to be detected by Jaffe's reaction. To determine if indican undergo any change in the organism, 2.7 grammes were injected into an animal, but in the urine indican only was found. No increase was caused in its elimination by the injection of orthonitrocinnamic acid, or of orthonitrobenzaldehyde alone, or together with aceton.—*London Medical Record.*

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINICAL SERVICE OF THOS. G. MORTON, M.D.,

One of the Attending Surgeons to the Hospital.

Lecture delivered November 29, 1884.

A CASE OF COMPOUND, COMPLICATED, COMMINUTED FRACTURE OF THE HUMERUS.

GENTLEMEN,—The first case that I will present this morning is one of a sailor, 54 years of age, who has sustained a compound complicated fracture of the lower third of the humerus by a fall on board ship two weeks ago. It is compound, because the fractured ends of the bone can be felt in the open wound; complicated, because the injury extends into the joint. A compound fracture is not necessarily a complicated fracture, even when, as in this case, it is at the same time comminuted. A fracture becomes complicated in a surgical sense when it is attended by injury of important structures, such as large blood-vessels or nerve-trunks, or when it extends into a joint. The fracture may, therefore, be complicated without being compound or comminuted.

Such injuries as the one before us are generally grave in proportion to their extent, or to the involvement of the joint surface. Immediately following such an injury, the synovial membrane lining the joint (which in health secretes simply enough fluid to lubricate the articulation) becomes inflamed, and effusion follows. The injury, frequently, is also sufficiently great to cause contusion of some adjacent structures, followed by more or less inflammation. The result is inflammation of the synovial membrane, or synovitis, and changes in its structure, which, with the fracture, leads to permanent alteration in the joint. Where the force has been sufficiently great to produce a compound fracture, there is usually severe inflammation. In either case the changes occurring in the synovial membrane are the same as those in hip-joint disease, or white swelling, the inflammation in one case being traumatic, in the other the result of constitutional disease.

Now, the chief danger from the accident which this elbow-joint has sustained does not consist simply in the fracture of the bone, but in the amount of injury to which adjacent structures have been subjected. If it were simply a fracture of the bone, we might have repair without marked degree of inflammation; but, where there is so much laceration, repair must take place by inflammation, which often results in abscess. This is what occurred here. I was obliged to make free incisions on the back of the arm to give vent to serum and pus. If you notice here, you will see a slight blush of inflammation upon the radial aspect of the arm, where there is another subcutaneous collection, which is either an abscess or a mass of broken-down and partially-decomposed blood.

In the prognosis of such injuries two things must especially be kept in mind,—the nature and the location of the lesion. The prognosis also varies with the age. A child with a compound fracture of the elbow—say a boy of 12 years of age—will give much better results from the treatment than a man of 50. One reason is that the reparative processes are more active in a child, on account of its growing condition; another is that these fractures in adult life usually occur in laboring-men who are given to the excessive use of alcohol, and their vital powers are impaired by their mode of life. In a child we are often able to seal up the surface-wound and to convert the case at once into one of simple fracture; this can only rarely be done successfully with adults. Every year of life reduces the chances of recovery with subsequent usefulness of the joint.

In cases of fracture involving a joint the prognosis varies with the importance of the joint and its size. It is worse in a hinge-joint like the elbow. You know that a hinge that is clogged by paint or any foreign substance cannot work smoothly. So in this joint, as a result of the fracture and changes in the synovial membrane, there will be more or less anchylosis, depending upon the plastic exudation and the inflammatory changes in the bones and membranes.

The effects of such injury may be inferred from this dry specimen from the museum of the hospital, illustrating a compound fracture of the lower end of the humerus extending through the condyles and involving the joint; the shaft above is broken in a transverse direction.

As regards the diagnosis, the symptoms

of such fractures are generally so well marked that if the surgeon see the case immediately after the injury there can be no mistake in the opinion he forms of the fracture; seen later, there may be so much swelling as to interfere with the diagnosis. In all cases where the nature of the case is not plain, it is better to give ether and carefully examine the injury. The joint may be invaded by a fracture from any direction; very often there is also luxation, due to the separation of the condyles. The bones of the forearm may be forced up so violently as to separate the fragments of the humerus, causing a luxation backwards. When the fracture is compound you can readily detect the fracture by inserting the finger if the wound be a large one.

Some of the most difficult of these cases of injury around the elbow-joint are those of fractures involving the head of the radius; sometimes it is almost impossible, even with the aid of ether, to make out the exact line of separation of the fragments.

With reference to treatment I will say a few words. In the first place, it is always proper to try to convert a compound into the simple variety of fracture by hermetically sealing it at once with lint and the compound tincture of benzoin, and covering the wounded part with a solution of laudanum and lead-water. It also is advisable to elevate the limb, and to give the patient anodynes. If you cannot convert it into a simple fracture, you must prepare yourself for what is likely to occur after compound fracture,—cellulitis and abscess. This is what has occurred in the patient before you. Sometimes the appearances are those of erysipelas, which you should also be prepared for. Where abscess forms, it must be evacuated early, in order to relieve the part from the irritation of the purulent material.

It is always well to bear well in mind the anatomical relations in making your incisions. You know that the principal blood-vessels and nerve-trunks lie upon the inner and anterior aspect of the limb, placed there because they are in this position less liable to injury. There is nothing, therefore, to make you fear long or deep incisions in the outer aspect of the arm. Here I make an incision at least five inches upon the arm and forearm, which gives free vent to the pus. This abscess seems to have been consequent upon injury received by the soft parts at the time of the injury; I cannot perceive any connection between the abscess and the fractured joint with my finger. It is an excellent plan after etherizing the patient to use the finger as a probe, so as to establish more accurately the limits of an injury.

When he was admitted there was a large amount of swelling, and the patient refused at that time to take ether to permit a careful examination. I now find a large portion of the upper fragment of the humerus denuded of periosteum. I will extend the wound through the triceps muscle, in order to make the bone project. Having exposed it, I now remove about three inches of it with the saw, and pack the wound with carbolized lint, and apply a posterior right-angled splint. It is a case in which amputation will probably be necessary.

[At the next clinic amputation of the arm at the middle was performed. The patient afterwards made a good recovery. —Rep.]

EXTENSIVE KELOID, PRODUCING GREAT DISFIGUREMENT OF THE FACE AND NECK.

This colored man, 32 years of age, was engaged in the working of a cotton-press eighteen months ago, when he was so unfortunate as to be severely burned in his hands and face and upper portion of

his breast and shoulders by an explosion. The burns healed well, but, as you see, the cicatrices have taken on keloid growth, which has involved in a mass of new growth the neck, both auricles, and the sides of his face, producing great disfigure-

ment, interfering with movement of the jaw and with hearing. We have applied collodion to the growth, and it has apparently led to some contraction, but probably no more than any dressing would which exercised pressure. We would probably have had just as good results from an ordinary bandage.

I propose this morning to amputate a portion of this tissue, in the hope that a healthy scar may be obtained, such as you see in his hands. I will remove the mass surrounding the right side of the face, as the growth here interferes with his hearing. I can save part of the pinna of the ear.

[This operation was performed without much bleeding. Two weeks later the wound had nearly closed, and the patient was willing to have the other ear operated upon. This was performed Saturday, December 20. The growth, which covered both ears, the sides of the face, and the neck, was successfully excised.—Rep.]

TRANSLATIONS.

Treatment of Acute Pneumonia by Baths.—If pneumonia be caused by the development in the human body of a specific microbe, as Dr. Chaumier (*Congrès de Blois*) maintained in a former communication, he insists that more account should be taken of this important etiological discovery as a basis for treatment. We should not, he says, add to the poison in the system another which is able to cause death as well as the first; and he unsparingly condemns venesection and blisters on account of their debilitating effects. Statistics prove that pneumonia abandoned to itself pursues a more favorable course than when treated by emetics, bleeding, and blisters. Although the disease cannot be cured, much can be done to relieve the symptoms, especially by cold baths. Each bath, at a temperature of 28° to 32° Cent. (82° to 90° Fahr.), was at once followed, in his experience, by an amelioration of the symptoms, lasting two or three hours. Two or three such baths were given daily. The author gives the following conclusions, based upon fifteen cases (fourteen were children), of which all recovered:

1. Cold baths do not present any danger in pneumonia at any period at which they may be employed.

2. They reduce the temperature and the frequency of the pulse, lead to the disappearance of the *bruits de souffle* caused by the fever; they diminish also the dyspnœa considerably; they relieve the thirst and permit a more abundant alimentation.

3. Having only used the bath with those who recovered without other treatment, M. Chaumier maintains a sage reserve as to the results to be expected from the treatment: he does not assert that these baths diminish the mortality, although everything leads him to believe that they do.

4. In adults, in order to obtain a durable amelioration, a bath should be given every two or three hours.—*Revue de Thérapeutique Médico-Chirurgicale.*

[Baths at the temperature indicated would not usually be considered as cold baths, but for pneumonia they are certainly preferable to cold baths as generally understood.—Ed. P. M. T.]

Incompatibility of Quinine and Iodide of Potassium.—M. Rabuteau, having seen gastric disorder, anxiety, nervousness, and general malaise follow the simultaneous administration of iodide of potassium and sulphate of quinine, attributes the symptoms to the chemical reaction, with local irritation of the stomach by the nascent iodine. He also warns against the administration of quinine to a menstruating patient, as serious and even fatal symptoms may ensue.—*Gazette des Hôpitaux.*

Morbus Maculosis Weilhofii.—Dr. Th. Hryntschak, of Vienna, publishes in the *Arch. f. Kinderheilk.* some experiments carried on with a view of deciding the question as to the contagiousness of morbus maculosis Weilhofii. He was not able to verify the results obtained by Petrone, inasmuch as the rabbits which he experimented upon did not suffer from the disease either when vaccinated directly or with the culture-fluids.

Oleum Gaultheriæ in Acute Rheumatism.—At the clinic of Professor Rossbach oil of gaultheria has been employed in a large series of cases of acute articular rheumatism, followed by equally prompt and striking results as had been obtained previously from the salicylate of soda. It is recommended to give it in capsule, after eating, on account of its disturbing effect upon digestion.—*Correspondenz-Blatt der Allgem. Aerzt. Ver. von Thüringen.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 24, 1885.

EDITORIAL.

THE COAGULATION OF THE BLOOD.

AN able and interesting review of the various theories which have been prominently upheld of late years concerning the coagulation of the blood is contained in a paper by Frederick P. Henry in the *Archives of Medicine*.* After premising the statement that coagulation is always a pathological process and never physiological, and referring to the extremely apt phrase of Hayem, that it is a kind of rigor mortis, or "cadaveric rigidity" of the blood, the writer points out that the act of coagulation furnishes most important data for the study of the physiology of the blood, being a sort of spontaneous analysis the thoroughness of which may be aided by external conditions.

Dr. Andrew Buchanan, of Glasgow, in 1831, after an ingenious investigation, concluded that coagulation was dependent upon the presence of the white blood-corpuscles, the fibrin pre-existing in a state of solution in serous fluids and liquor sanguinis without any spontaneous tendency to coagulate; upon these fluids the white cells acted as a sort of ferment, producing an effect like that of rennet upon milk. Dr. Alexander Schmidt, in 1861, claimed that this action of the white blood-cells was due to their destruction and disintegration, which liberated serum-globulin: this he termed the fibrino-plastic substance. The coagulating property of transudates he found to reside in a substance which he identified also as belonging to the class of globulins, to which he gave the name of fibrinogen. Fibrin he supposed was formed by the combination of these two substances. This view he afterwards modified by invoking the aid of a third agent or factor in the coagulation, which he called the fibrin-ferment.

According to Schmidt's theory, then, blood-coagulation is due to the union of the substances fibrinogen and serum-globulin, under the influence of a ferment,—the first-named being the only one pre-existing in the blood, the others being formed after the blood has been withdrawn from the vessels. Hammarsten has more recently broached the view that the serum-globulin is an unnecessary factor in the formation of fibrin.

In contrast with those who consider fibrin to be caused by the union of soluble substances in the liquor sanguinis, we have the observations of Wooldridge, Norris, Hayem, and Bizzozero,† who attribute its formation, in great part at least, to a transformation of the morphological elements of the blood. The first-named holds the opinion that the plasma changes the leucocytes directly into fibrin, but at the same time a substance is liberated from the cells (fibrin-ferment) which converts fibrinogen also into fibrin. The remaining authorities mentioned agree in associating the formation of fibrin with changes in certain morphological elements of the blood, Norris attributing it to changes in what he terms the invisible corpuscle or advanced lymph-disk, the two others to similar changes in bodies termed by Hayem *hématoblasts*, from their supposed share in the formation of the red blood-corpuscle, and by Bizzozero *blutplättchen*. What the exact *rôle* played by these colorless corpuscles, or blood-plates, may be, is not yet determined, but it has not been established nor even positively claimed that they are the sole agents in the production of fibrin, as the original authorities concede that the white corpuscles also may be concerned in fibrin-formation.

* Vol. xii. No. 3, December, 1884.

† Quoted by Dr. Henry.

In the opinion of Dr. Henry, a blood-clot is the result of two distinct processes,—coagulation proper and fibrin-formation,—the one chemical, the other morphological. Coagulation occurs in milk under the influence of a ferment, but there is no fibrin-formation. "The same process takes place in blood under the influence of a ferment derived from the white corpuscles, and perhaps also from the blood-plates, while at the same time, and in addition, there is formed a fibrinous reticulum which is a direct metamorphosis of the same elements."

It is possible that there may be still a third, and as yet disregarded, factor in the formation of a blood-clot,—*i.e.*, with the chemical and morphological may be conjoined a vital process. The view of the blood which regards it as a living tissue, endowed with physiological energy manifested normally upon condition of its incessant motion in healthy vessels, may also see in fibrin-formation an abnormal and aberrant expression of nutritive force. The term "cadaveric rigidity" of Hayem is certainly very suggestive.

COMMA-BACILLI AND CHOLERA.

THE positive claim of Dr. Koch that the comma-bacillus is the *materies morbi* of epidemic cholera, made in his report to the German government, has not yet been implicitly acknowledged by other competent observers, who have with great care gone over the ground traversed by the great mycologist. Drs. Klein and Heneage Gibbes, in their preliminary report of the result of their investigations carried on in Bombay and Calcutta, declare without any circumlocution that "the statement of Koch that 'comma-bacilli' are present only in the intestines of persons suffering from or dead of cholera is not in accordance with the facts, since 'comma-bacilli' occur also in other diseases of the intestines,—*e.g.*, epidemic diarrhœa, dysentery, and in intestinal catarrh associated with phthisis." Other statements meet with a similar flat denial, and all attempts at inoculating animals with cholera-fluids or bacillus-cultures completely failed. The bacilli in question were cultivated, and it was found by Dr. Klein that they did not behave differently from ordinary putrefactive organisms.

In replying to similar criticisms upon the comma-bacillus recently, Dr. Koch remarked that he remembered that "they made some such remarks about the bacillus tuberculosis two years ago." This is a coincidence which is not without significance.

COLLECTIVE INVESTIGATION.

WITHIN the last week or two there have been distributed to the members of the State Medical Society of Pennsylvania circulars, accompanied by three blank forms, which have been sent out by the Committee on the Collective Investigation of Disease appointed at the last meeting of the State Society. The cards are of different colors, as adopted by the British Association committee, — buff, green, and red,—and are respectively for pneumonia, chorea, and acute rheumatism. The questions have been so arranged as to be answered with the least expenditure of energy and time on the part of the observer, and it is hoped that every member of the Society will feel it incumbent upon him to aid the committee in its work, and will avail himself of the opportunity to report a case of each disease, in order that a fair trial may be made of this method of collective investigation, which is affording such satisfactory results in England. The cards, after being filled up, are to be returned to the address of the chairman, Dr. James Tyson, in Philadelphia, not later than the first day of April, 1885, but the committee requests that they be returned earlier if possible, in order that the labor of their collation may be rendered less arduous.

STATE BOARD OF HEALTH.

A CONFERENCE meeting of delegates from the various local Boards of Health of the State was held at Harrisburg January 13, to take measures looking towards the establishment of a State Board of Health for Pennsylvania. A bill has been carefully prepared, and it is expected that a determined effort will be made to have it passed at the present session of the Legislature. The recommendation contained in the annual message of the Governor has given encouragement to those who have for so long had the matter in charge, and there now seem to be better prospects for such a bill than at any previous session. The Board is to consist of six members, not necessarily physicians, but the Secretary must be a sanitary expert, who shall receive a salary of two thousand dollars a year. The entire appropriation for the Board is limited by the proposed bill to ten thousand dollars.

The members in attendance upon the conference organized a State Sanitary Association, Dr. Green, of Pittsburg, President, which will act provisionally as a voluntary board of health until the bill is passed.

NOTES FROM SPECIAL CORRESPONDENTS.

NEW YORK.

PROFESSOR AUSTIN FLINT ON DYSPEPSIA.

AT the meeting of the New York State Medical Association, November 18, 1884, Dr. Flint read a paper, entitled "Remarks on the Dietetic Treatment of Dyspepsia," in which he gave expression to views which would lead us to suppose that even as great a mind as his may be influenced to lay aside its judicial qualities and take the ground of the extremist. It would seem that, having seen a number of cases of dyspepsia in which the patients were benefited by abandoning their self-regulated diet, the author had allowed himself to conclude erroneously that appetite is an infallible guide in the proper selection of food, both for the well and for the functionally diseased. At the beginning of his paper Dr. Flint makes a, seemingly, very just distinction between indigestion and dyspepsia: "The name (dyspepsia) signifies difficulty of digestion. Now, digestion may be difficult, and attended by more or less suffering and disturbance of the nervous system, the digestive function, nevertheless, being duly and completely performed." But farther on, in speaking of the symptomatology of dyspepsia, he loses sight of this distinction, and applies his remarks to a train of symptoms in which we may justly suppose that indigestion plays a more or less important *rôle;* and for this reason his paper is open to a greater degree of criticism. Indeed, it would be difficult to make a strictly clinical distinction between indigestion and simple dyspepsia (dyspepsia without indigestion). Dr. Flint evidently recognizes this difficulty when, in speaking of dyspepsia, he says that in many instances there is coexisting anæmia, although he adds, "The dyspepsia leads to impoverishment of the blood, often because alimentation is reduced below the needs of nutrition, and this condition tends in no small degree to increase the dyspepsia and render it persistent."

The author's instructions with regard to the diet of persons suffering from dyspepsia seem to us to be particularly objectionable, because, coming from a gentleman of so high authority, they are liable to lead many of his professional brethren and the laity to errors of teaching and living. He says, "Suffice it to say that the maxims which have been enumerated as causative of dyspepsia are to be reversed in pursuing the plan of treatment which it is the purpose of this paper to submit. The instructions, abbreviated, will then be as follows:

"Do not adopt the rule of eating at stated periods,—twice or thrice daily. Be governed in this respect by appetite; eat whenever there is a desire for food. Eat in the evening, or at bedtime, if food is desired. Insomnia is often attributable to hunger. In the choice of articles of diet, be distrustful of past personal experience, and consider it to be a trustworthy rule that those articles will be most likely to be digested without inconvenience which are most acceptable to the palate. As far as practicable, let the articles be made acceptable by good cooking. As a rule, the better articles of food are cooked the greater the comfort during digestion. Never leave the table with an unsatisfied appetite. Be in no haste to suppose that you are separated from the rest of mankind by dietetic idiosyncrasies, and be distrustful of the dogma that another man's meat is a poison to you. Do not undertake to estimate the amount of food which you take. In this respect different persons differ very widely, and there is no fixed standard of quantity which is not to be exceeded. Take animal and vegetable articles of diet in relative proportions as indicated by instinct. In the quantity of drink follow na-

ture's indication,—namely, thirst. Experience shows abundantly that, with a view to comfortable digestion, there need be no restriction in the ingestion of fluids."

We cannot help but feel that in laying down these maxims Professor Flint has reversed those rules which common sense would dictate, and which general experience has proven to be true, and that he has been led to accept the reverse of the truth by having observed certain cases in which persons desiring to follow those rules had failed to do so in fact, and their symptoms had grown worse therefor. At the same time he seems to have overlooked the fact that dyspepsia, in the sense in which he employs the term, may be due to different causes. The affirmative rules to be observed in the treatment of the dyspeptic, the negative of which he recommends, doubtless grew out of the fact that there are different forms or causes of dyspepsia, and it is more than probable that Dr. Flint, in his large experience, has met with examples of these different forms. One person has dyspepsia because his appetite has led him to overeat, in evidence of which we may quote the author of the paper, who says, "The appetite may be more or less impaired, but it is often not diminished, and not infrequently it is increased." Now, if the appetite be increased we may justly suppose that some persons would be ignorant or morally weak enough to cater to their natural inclination and gormandize; and if this be true, the advice to dyspeptics indiscriminately to eat at no stated periods, and to never leave the table with an unsatisfied appetite, could not do otherwise, in many cases, than to work evil. These persons might be able to digest a normal quantity of good food, taken at proper times, without its giving rise to any dyspeptic symptoms or ill health, and their dyspepsia is really due to an excess of food which they are not capable of digesting (therefore due indirectly to indigestion). Were they able to digest all they ate they would fall among those of whom Dr. Flint speaks as follows: "Finally, let us learn a practical lesson from our observations of the class who 'live to eat,'—the *gourmet* and the *gourmand*,—they 'who fare sumptuously every day.' Dyspeptics are not common among this class." But before reaching the age at which they can be classed among those "who fare sumptuously every day" their dyspeptic symptoms become so aggravated that they are obliged to cease "living to eat." The writer once suffered from dyspepsia, which finally led to broken health, brought on when a boy at a time when his appetite was ravenous, and was allowed unregulated freedom, at all hours of the day and night, in the midst of an abundance of tame and wild fruit, vegetables, and a well-supplied pantry. His symptoms of dyspepsia disappeared and health returned only after the rules were obeyed which Professor Flint advises us to disregard.

Again, the statement, "Consider it to be a trustworthy rule that those articles will be most likely to be digested without inconvenience which are most acceptable to the palate," seems to us to be of doubtful propriety. It is just as likely, if one is unable to digest a given kind of food with convenience, that it will be among those articles for which he has an appetite as otherwise. Dyspepsia, in the sense in which it is used by the author of the paper, may reasonably be supposed to be due to a peculiar affection of certain parts of the nervous system, and experience proves that the appetite may demand certain articles of food which, when ingested, affect that part of the nervous system in a manner to produce dyspeptic symptoms.

"Experience shows abundantly that, with a view to comfortable digestion, there need be no restriction in the ingestion of fluids." The author does not say what kind of fluids, but, even if he meant only water and milk, there are, doubtless, many among both physicians and the laity who would reject the statement as too sweeping, and could bring forward abundant evidence showing that persons had injured their powers of digestion by indiscreet drinking of fluids during meals and in the intervals. Several physicians in this city attribute the weak and "run-down" condition, in nearly all cases among their female dispensary patients, to the habit of drinking an excess of tea, or perhaps of coffee. The author seems not to have considered the fact that the appetite for food and drink depends much upon habit, and that many people acquire habits of eating to excess particular articles of diet, of drinking perhaps three or more cups of black coffee with each meal or a large quantity of beer, and of eating at hours when their business will least favor digestion.

Objections might also be made to certain other of his maxims, but we will close by saying it is difficult to avoid the conclusion that Professor Flint, in his desire to correct an apparent tendency on the part of that class of patients of an active mental development to go to a certain extreme, has allowed himself to fall into the error of advising all classes of dyspeptics to go to the opposite and worse extreme. May not this error be due to his practice being largely among the thinking class of people and less among the laboring and uneducated? We should think this probable, inasmuch as he says dyspeptic patients do not belong among hard-working laborers or mechanics. From our observation of men, we have been led to believe that there are many cases of dyspepsia among this class of persons, and here we think the rules which Professor Flint advises all dyspeptics to disregard would be

especially commendable, whereas in the class in which he is most commonly consulted it might perhaps be better advice if they were told to labor more with their muscles in healthful employment, to read and study less, and to follow the promptings of their vegetative system,—appetite, sleep, etc.

One paragraph, including this sentence, "There are various incidental points of inquiry, and certain qualifications of statements, which a full consideration of the subject would embrace," gives the impression that the author does not differ so radically from us in his views of the subject as the general tone of the paper would imply; and, if this be true, we regret that he did not take more time and qualify the statements which may, as they now stand, prove to some a stumbling-block in the way of recovery from dyspeptic, and also general digestive, disorders.

PROFESSIONAL NOTES.

The Medical Department of the University of the City of New York has sustained a serious loss in the death of William Darling, M.D., LL.D., F.R.C.S., for many years Professor of Anatomy. Dr. Darling was said to be given to eccentricities, and among others was one which students of medicine would be glad to recognize in all teachers,—viz., that of beginning and ending his lecture on the stroke of the clock. It has been reported that none of Professor Darling's relatives survive him; but a physician-friend told me that he is acquainted with one of his brothers, who resides at or near Burlington, Iowa.

It has been over two weeks now since Dr. Richard C. Brandeis disappeared, and up to the time of this writing no information has been received of his whereabouts. Dr. Brandeis was a graduate of the College of Physicians and Surgeons (1871), and was one of the Professors of Diseases of the Nose, Throat, and Ear at the New York Polyclinic.

About a week ago Dr. Rudolph Tauszky shot his wife and then himself, the ball in both cases striking the head, but probably not inflicting wounds which will cause death. It is thought that he was temporarily insane when he committed the deed. Dr. Tauszky has been a liberal contributor to medical literature, had made more or less a specialty of the diseases of women, and had recently testified as a medical expert in several cases of insanity.

A number of cases of typhus fever have developed in a West Thirty-second Street tenement-house, and the health authorities are having a little trouble in stamping out the endemic. One hundred and fifty-seven cases of measles were reported by the Board of Health for the week ending January 6, fifty-nine of diphtheria, fifty-eight of scarlet fever, and thirteen of typhoid fever.

The Directors of the New York Dispensary hereafter propose to appoint three physicians who shall have passed a competitive examination, paying them a salary of eight hundred dollars annually for services of three or four hours' duration at the daily dispensary. Would not this be a good plan for diminishing the unnecessarily large number of our free dispensaries and so-called hospitals? But so long as the city physician remains as ambitious as he at present appears to be to have his name connected with some public institution, this change for the better will probably not be brought about except through the co-operation and instrumentality of directors of hospitals and dispensaries. The question might suggest itself to the curious whether in any given case the change was not due to a supposition that better services would be rendered the sick poor by a few physicians who received the moral support of a pecuniary consideration than by a larger number, who, inasmuch as their services were entirely uncompensated, might feel themselves justified in trying to advance their medical skill and reputation by practices which would be rejected by one whose eye was single to the good of his patients. R. C. S.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a clinico-pathological meeting of the Society, held at the Hall of the College of Physicians, December 17, 1884, the President, Dr. W. M. Welch, in the chair, papers were read by Drs. J. M. Barton (see page 316), Dr. W. C. Hollopeter (see page 304), and others.

DISCUSSION ON INVERSE TEMPERATURE IN TYPHOID FEVER.*

Dr. J. C. Wilson, in opening the discussion, said, "The paper of Dr. Hollopeter is very interesting and suggestive. It touches upon or suggests almost every important clinical problem relating to this disease. Its free discussion, therefore, would be impossible in one, or indeed in many evenings. Two or three points call for special consideration.

"First, the typical temperature-curve and its variations. The well-known course laid down by Wunderlich as a standard is met with perhaps less frequently than strongly-marked variations. Nevertheless, a knowledge of that course is the key to the understanding of the variations from it. Wunderlich, after describing the course of the first four or five days, lays down the law that every case which does not conform to this temperature-type is not typhoid fever. This dictum has been the source of manifold er-

* Reported by G Betton Massey, M.D.

rors in diagnosis. No more fallacious statement could be made. Cases of undoubted typhoid fever constantly occur in which the range of temperature fails to conform to the typical curve, not only in the beginning of the attack, but throughout the whole course of the disease. In fact, cases sometimes occur, the nature of which is fully established by the complexus of symptoms and the existence of local epidemics, in which the temperature remains throughout even *sub-febrile*. The singularly labile temperature in this disease, rising and falling, as it does, under very slight disturbing external influences, makes it a matter of surprise not that the temperature is not always typical, but rather that it ever closely conforms to the type.

"Second, the inversion of the diurnal range, of which Dr. Hollopeter has given two instances, is not common. I have seen cases of it, to which I will briefly refer. I am not aware that any adequate theory of this curious clinical phenomenon has yet been advanced.

"Third, house-epidemics. The second part of the paper, which considers the details of this curiously circumscribed and localized outbreak, is very interesting and important. It is by the study of such house-epidemics that a true insight into the etiology of the disease is to be gained. I do not agree with the author of the paper in ascribing the disease in the infected house to the percolation of waste-water through the cellar-wall from the adjoining premises. In order to establish this theory it would be necessary to show, first, that such percolation, if capable of producing this disease, had not been going on for an indefinite time prior to the attack, and, secondly, that typhoid fever had existed in the neighbor's house, or at least that the dejecta of typhoid patients had been thrown into the pit from which the drainage into the cellar ran. These facts have not been shown. On the other hand, it appeared clear enough that the first case, the young woman who had come home sick from another house, had introduced the disease. An investigation of the house and neighborhood from which she came would doubtless shed light upon the subject. House-epidemics are numerous in Philadelphia. Certain houses, however, seem to be the abiding place of the infecting principle, seeing that cases occur in them from time to time during a series of years."

Dr. E. T. Bruen: "I have been very much interested in Dr. Hollopeter's paper, and also in the remarks of Dr. Wilson. I agree particularly with the portions relating to the contagion. Two cases recently seen by me illustrate this. A washerwoman took home the clothes of a typhoid-fever patient. Within a week her two children drooped and became feverish. They were taken to the Children's Hospital, and one died there with no autopsy. The other was taken home, where it died, and I made a post-mortem examination. The typical conditions were present. No other cause for their sickness was known.

"I am also interested in what Dr. Wilson has said about alterations of temperature from slight causes. We notice the same thing in diseases of the liver, in which cases the thermal wave fluctuates with the ingestion of food. If we admit these causes, I think we can readily admit psychic influences in the same *rôle*.

"In diagnosticating typhoid fever, it is to be distinguished from malarial fever and catarrhal fever. Malarial fever is *sui generis*, and can be controlled in this latitude by quinine. I believe that malaria will modify the initial stages of typhoid fever. Thus one of the groups of cases called typho-malarial takes its name. Neglected malarial fevers form another group of so-called typho-malarial fever, which is not a disease *sui generis*.

"I have seen many cases of mild typhoid fever,—the so-called typhoid ambulatorius. Throughout these cases have shown a temperature of 100°, not over 100°, but I would not make the diagnosis of typhoid fever if the temperature after the fifth day fell below 100° in the evening.

"Catarrhal fever is characterized by peculiar weakness, with various catarrhal conditions of lungs and bowels. The temperature runs from 99° to 100°, and is at times almost normal. Such cases should be classed as catarrhal fever, and are very similar to the specific forms of influenza. They may be recognized by the fact that the temperature is very irregular, and it is impossible to control this feature by quinine. I think these are the cases which have often been confused with mild typhoid."

Dr. Baldwin: "Dr. Levick some time ago published a paper in which he spoke of a family predisposition to typhoid fever as well marked in some families as that of phthisis. I should like to ask Dr. Wilson if he has noticed any cases of like character."

Dr. B. Trautmann: "Niemeyer speaks of inverse temperature in typhoid fever, and says that these cases end generally fatally. This seems to disagree with the statements made here to-night. I have at this time a case showing this curve, in which a hemorrhage of the bowels followed this morning."

Dr. Kevin: "I have also a case now under treatment showing inverse temperature."

Dr. Arthur V. Meigs: "With regard to the etiology, I do not think Dr. Wilson's position is well taken. In the face of the authority of Murchison that typhoid fever may arise *de novo*, it seems to me hardly fair to assume the germ-theory as proved, although the medical mind seems at present to be inclined in that direction. Typho-malarial fever has always seemed to me a bad name, for it misleads; it means in its proper sense a hybrid,—both malarial disease and typhoid

fever co-existing in the body at the same time."

Dr. W. A. Edwards: "In the case of a young man under my care whose temperature presented the peculiarities spoken of, a diagnosis of double quotidian was made. On the eighth day signs of typhoid fever set in, and lasted four weeks, then again there was a typical double quotidian. If the case had not been so diagnosticated, it would have been put down as a case of typhoid fever with inverted temperature. This, with other cases, I published in the *Medical and Surgical Reporter*, November 17 and 24, 1883, and mention it to-night to call attention to the fact that all cases of inverted temperature in typhoid fever are not due to the typhoid entirely, but frequently to a complication, this complication occasionally being almost unrecognizable except for its effect on the temperature."

Dr. Wilson: "A clear comprehension of the mode in which typhoid fever is propagated from previous cases by means of a specific infecting principle is of the utmost importance. Murchison, it is true, held that it might arise *de novo*. Nothing in the literature of the subject is more brilliant than that great author's advocacy of this view, and the student of the subject knows that it was maintained in Murchison's day with a vigor scarcely inferior to that with which it has been defended here, with more success. To Dr. Wilson Budd, of Bristol, is due the credit of showing that Murchison's view was untenable. To-day it is no longer entertained."

Dr. Meigs: "I did not pretend to deny that a single case of typhoid fever may be the focus from which any number of others may arise. I merely contended that, in the face of Murchison's opinion that the disease may arise *de novo*, we should be careful how we assume as proved the germ-theory."

Dr. J. Solis Cohen: "I do not rise to speak directly to the subject of the paper, as I do not see typhoid fever except in hospital practice. Many years' observation has convinced me that sudden rises of temperature in typhoid fever, as in other diseases, are often due to obstruction of the bowels, even though diarrhœa may exist. A small dose of castor oil will usually quickly relieve the bowels and reduce the temperature. The ordinary milk-diet is then to be modified by the addition of lime-water, or by substituting boiled milk for cold. My residents have for years had general instructions to pursue this plan without awaiting my daily visits.

"The family epidemic recorded reminds me of a similar one in a German family, the members of which were distributed to several hospitals, three of them coming under my own care. A marked local epidemic occurred among the sailors on board the Russian war-vessels which several years ago were lying off the wharf at Kensington, some sixty of whom came under my care with the most typical demonstration of the true typhoid curves that I have ever seen. The temperature-charts looked as though they might have been copied from a text-book. The cause in these instances was the drinking of water from the Delaware River, which the sailors, following an old custom, dipped from the side of the vessel to within a few feet of the open outlets of sewers.

"I was very much interested in the story of the poor washerwoman's family. Our duty in the presence of contagious disease is very clear, and is too much neglected by physicians. We should not allow our patients to send clothes out to be washed until they have been thoroughly disinfected. Indeed, rather than subject a family to contagion, let the clothes be burned. Many a poor washerwoman in this city brings typhoid fever, diphtheria, and other diseases to her household through the carelessness or indifference of her customers."

Dr. Hollopeter, in closing the discussion, said, "I had felt a certain uneasiness in presenting my cases of *inverse temperature*, as I could obtain but little authority for the same; yet I have recorded the simple facts, and am glad to learn that other members have also noticed similar cases. In a future paper I hope to give more of the literature of the subject. In answer to Dr. Wilson as to the causation of the house-epidemic, I would state that Mary, the first to take sick, was at the time not living at home, yet she frequently came home for a few days at a time. The family she was working in were all healthy."

PHILADELPHIA NEUROLOGICAL SOCIETY.

THE regular stated meeting was held December 22, 1884, the Vice-President, Dr. CHAS. K. MILLS, in the chair.

Dr. MILLS read a paper on the treatment of epilepsy, of which the following is an abstract:

NOTES ON THE TREATMENT OF EPILEPSY.

His remarks applied chiefly to the medicinal treatment of epilepsy proper,—grand mal and petit mal. He did not intend to refer to the treatment of convulsive seizures due to tumors, meningitis, spinal disease, etc.

As to the curability of epilepsy, some apparently authentic cases of cure were on record. After looking over the subject, he could only recall seven cases of apparent or real cure in his own practice, private and hospital. In all of these the attacks remained away for from more than one to more than three years. Gowers mentions a number of cures,—at least, cases in which seizures had not recurred for as much as four, five, six, or seven years. Several of these cases were children. Three

of the seven cases alluded to by Dr. Mills were children. All observations as to the cure of epilepsy were necessarily imperfect. After a number of years the attacks recur again. Although, however, the absolute curability of epilepsy might be doubtful, certainly great benefit from treatment is to be derived in most cases. It is a wrong to such patients not to treat them.

He had used the following remedies, singly, three or four times daily, in a series of cases, during the last ten years: Bromide of potassium, grs. x to ʒj; bromide of sodium, grs. x to ʒj; bromide of ammonium, grs. x to ʒss; monobromide of camphor, grs. iij to vj; hydrobromic acid, fʒss to fʒss; iodide of potassium, grs. v to ʒss; biborate of sodium, grs. xv to xx; chloral hydrate, grs. x to xv; oxide of zinc and valerianate of zinc, grs. iij to x; nitrate of silver, gr. ¼ to gr. ½; tincture of belladonna, ♏x to xv, or extract of belladonna, gr. ¼ to gr. ½; extract of cannabis indica, gr. ⅛ to gr. ¼; fluid extract of cocculus indicus, ♏j to iij, or tincture of cocculus indicus, ♏v to x; nitrate of potassium, grs. v to viij. Other remedies, which he had only used in combination with some of the above drugs, were as follows: Conium juice, fʒj, or fluid extract, ♏iij to x; tincture of digitalis, ♏v to x; sulphate of strychnia, gr. $\frac{1}{40}$ to $\frac{1}{30}$; Fowler's solution of arsenic, ♏ij to v; fluid extract of ergot, fʒj to fʒij, or extract of ergot (Squibb's), grs. iij to vj; iron, cod-liver oil, and quinine.

The bromides were certainly the best remedies, and the bromide of potassium, in his opinion, stood at the head of the list. The bromide of sodium came next best to the bromide of potassium. He thought the bromides affected the nerve-centres directly. The mixed bromides were better, usually, than any one of them used singly.

The bromides could be advantageously combined with other drugs. The combination which he had found, on the whole, the best for long-continued use was bromide of potassium, grs. xv; bromide of sodium, grs. xv; solution of the arsenite of potassium (Fowler's solution), ♏ij; conium juice, fʒss, or the fluid extract of conium, ♏iij to v. This was generally made up with syrup of orange and some bitter infusion.

Another good combination, mentioned also by Gowers, was the bromide of potassium and tincture of digitalis. It was only especially valuable in cases complicated with weak heart or mitral disease. Monobromide of camphor had no advantage over the bromides. Hydrobromic acid was efficient in very large doses, but so much water had to be given with it that the amount to be swallowed was appalling to the patient. It sometimes irritated the stomach. Borax was not of established value, but helped a few cases temporarily. He found the iodide of potassium, unless especially indicated, had little value when used alone in the treatment of epilepsy. Chloral hydrate is not of much value when given alone, but with the bromides, in cases uncomplicated with cardiac disease, it sometimes makes a useful combination. Trousseau's belladonna treatment had been used without noteworthy success. Cannabis indica was not to be depended upon. He had tried cocculus indicus in six cases at the Philadelphia Hospital. None improved, and four were made worse by its use, one of the four becoming insane while taking the drug. At the request of Drs. Reichert and Hinsdale, he had used the nitrite of potassium in seven cases. Of these, only one seemed to be benefited, and some were made worse by its use. When the bromides had to be stopped, the zinc salts or the nitrate of silver were the best substitutes, but they could only be relied on for a short time.

The way to treat epilepsy, in his opinion, was to simply have a plan of treatment, and carry it out over a series of months or years. He would, for instance, first put a patient upon a single bromide, say fifteen grains three times a day, to be increased until a decrease in the number and severity of the paroxysms was produced. He kept him upon this perhaps for a month. He then used the mixed bromides, or some combination of bromides with other drugs, preferably the bromides, arsenic and conium prescription. He watched the condition of the patient, and, if necessary, also put him on cod-liver oil, quinine, or iron.

With reference to nitrates, bromates, etc., he said that there was probably some chemical or chemico-physiological reason for inefficiency. The *ites* and *ates* would probably never give as good result as the *ides*. Dr. Mills believed with Dr. Pepper (*Med. and Surg. Reporter*, January 12, 1884) that close attention should be paid to every point in the daily life of an epileptic,—to diet, rest, and hygiene; but he did not, with his present experience, believe that a genuine case of thoroughly-developed epilepsy could be cured, or even greatly benefited, without drugs. Harm, however, might be done by over-use of drugs.

Among the surgical and external means of treatment he had successfully used were excision of cicatrix, removal of neuroma, actual cautery, and blistering to the neck or head. He said he did not use counter-irritation to the scalp, but was a strong believer in the actual cautery, used after Brown-Séquard's method, to the nape of the neck.

DISCUSSION.

The discussion was opened by Dr. E. T. REICHERT. He said that the efficacy of the bromides was certainly not due to the bromine, for bromide of potassium is the best of the bromides, and it contains less bromine than any of the others. The amount of

bromine in the chief bromides, as given by Gowers, is as follows:

Bromide of ammonium	.	81 per cent.
Bromide of potassium	.	67 "
Bromide of sodium	.	77 "
Bromide of lithium	.	92 "

All the bromides act alike, but with varying degrees of efficiency. The bromates, nitrites, etc., are not as useful as the bromides. A certain line of similar chemical salts seem to give uniform physiological and therapeutical results.

Dr. Guy Hinsdale said that, in regard to the cases in which Dr. Mills used the nitrite of potassium, some four years ago, one was benefited, some remained the same, while others were apparently made worse by its use.

Dr. Wharton Sinkler wished to know if any of the members of the Society had used hyoscyamus, and with what results. He said that Althaus, of London, reported cases in which tincture of hyoscyamus had been used successfully in doses of from one, two, or three drachms. He said that he had reported one case of epilepsy which had been greatly benefited by cannabis indica, after the bromides and other remedies had failed.

Dr. H. M. Wetherill said that, in his experience, the bromide of potassium was the best remedy. He said he had never tried the tincture of hyoscyamus. He had never seen a case of epilepsy entirely recover.

Dr. F. Dercum said that his experience was summed up in the statement that he had found the bromides the best.

Dr. Morris Lewis spoke of the cure of a child 3 years old, at the Episcopal Hospital, in which he could obtain no results with the bromide of potassium. The seizures continued, and were worse, if anything. He then resorted to bromide of ammonium, and with immediate good results.

Dr. J. H. Lloyd said he thought that in cases of epilepsy attention to the digestive functions and to sleep was highly important. He called attention to the observation of Dr. Radcliffe, that epileptics have a tendency to overeat and to sleep too much. In his own experience he had found that when constipation was present the seizures were likely to be more frequent and severe. Dr. Radcliffe and other English physiologists seemed to prefer comparatively small doses of the bromides long continued. Dr. Lloyd believed the combination of three bromides with the iodide of potassium to be one of the best in the treatment of epilepsy.

Dr. A. J. Parker said he believed we could not say that the effect of a drug like bromide of potassium, bromide of sodium, etc., was due either to the bromine, or potassium, or the sodium, etc. Each of these salts is an individual drug, each molecule of which has its own form of motion. Bromine is a substance with its own peculiar molecular condition of motion. Potassium, similarly, has its own motion. Bromide of potassium is the resultant of the two motions. Certain members of the same chemical families, as the bromides, iodides, and chlorides, would seem to go together in therapeutical efficacy, due to similarity of their forms of molecular motion. At any time we may expect, however, to find wide differences, since our chemical equations simply represent an idea of structure, and tell us nothing concerning the form of molecular movement; and therapeutic effects must certainly depend more on the energy and form of motion than upon any other qualities.

Dr. E. T. Reichert made a few remarks on the use of

HYDROBROMIC ACID AND THE BROMIDES IN SEA-SICKNESS.

He said, while crossing the ocean, he had the opportunity of studying the effect of hydrobromic acid and some of the bromides in sea-sickness. Hydrobromic acid was effectual, but had to be used in such large doses that, owing to the dilution with water necessary, the bulk to be taken was excessive. The bromides were therefore, he thought, to be preferred. Bromide of sodium, in large doses, was effectual in one bad case. He believed that all the bromides were good.

Dr. J. M. Taylor spoke of the use of

NITRITE OF POTASSIUM IN ANGINA PECTORIS.

In an aggravated case of angina pectoris he had obtained very good results with nitrite of potassium. The patient had been suffering for over a year with paroxysms of increasing intensity, until death seemed imminent. After giving the nitrite of potassium for four weeks the patient recovered. Nitrite of amyl was used sparingly, to control the paroxysms.

Lewis Brinton, M.D.,
Recorder.

PHILADELPHIA CLINICAL SOCIETY.

At a stated meeting held November 28, 1884, Dr. Henry Beates in the chair, Dr. Roberts read a paper entitled

NOTES ON SOME INSTRUCTIVE CASES OF HERNIA.

He reported cases illustrating reduction of an irreducible femoral hernia of seven years' standing, irreducible incomplete hernia, recovery from strangulated hernia without operation, herniotomy for strangulated femoral hernia in a paralytic, and others. He desired to emphasize particularly the following points:

That inguinal and femoral hernia will be found at the same time on the same side much oftener than is supposed.

That it is safer to operate in cases of sus-

pected strangulation than to postpone operation beyond twelve hours.

That herniotomy is attended with little hemorrhage, and, if done antiseptically, is accompanied by rapid union and little risk to life.

DISCUSSION ON DR. ROBERTS'S PAPER.

Prof. JAS. B. WALKER: In connection with Dr. Roberts's paper, a brief narration of the salient points of the following cases may be of interest:

Case I.—A lady, aged 79, as the result of a fall noticed a swelling in the left groin below Poupart's ligament, in the vicinity of the femoral ring. The tumor soon occasioned marked disturbance. It was of doughy consistency, and cough failed to impart succussion. Percussion did not elicit a tympanitic note, and taxis failed to reduce it. As there was a doubt of its real nature, anæsthesia was induced with ether, and still taxis failed. The existence of symptoms of strangulation —viz., constipation, nausea, and vomiting— determined operative procedure, when an entero-epiplocele was disclosed. The omental element was the greater, and enclosed a small knuckle of gangrenous intestine; this constituent of the tumor was so small that the ordinary symptoms of succussion and tympany were rendered non-detectable. Hot water failed to develop manifestations of vitality, so the section of intestine was excised and the healthy ends stitched together. Suppression of urine followed the operation, and death resulted on the third day.

Case II. was an instance of inguinal hernia in a female advanced in years. Efforts at reduction by a number of physicians had failed. Notwithstanding the length of time intervening, by properly applying taxis, he succeeded in reducing the tumor. The probable cause of failure on the part of other attendants was improper attempts at taxis. The mass pressed out over the ring in a manner to defeat their object. This is, in a majority of instances, the undoubted cause of failure of efforts at reduction.

Case III.—A male with complete right inguinal hernia, strangulated. Taxis failing, an operation was resorted to, but the case terminated fatally. The peculiarity consisted in a deposit of fibrin or lymph nearly two inches in thickness surrounding the external ring.

Case IV.—A gentleman, whose vocation required at times heavy lifting, complained of a peculiar burning or stinging pain limited to the right inguinal region. There was no perceptible tumor. The symptoms were invariably aggravated by physical effort. I diagnosticated incipient inguinal hernia, and advised a truss. The patient, being dissatisfied, consulted an irregular physician, who ridiculed the diagnosis given, and administered homœopathic powders for nearly four weeks, with, of course, no result. By this time the hernia was protruded and unmistakable. The patient now wears a proper truss, and is practically well.

In reference to umbilical hernia, I wish to call attention to the fact that the umbilical opening is comparable to the cranial fontanels in that, like the latter, it gradually closes with advancing age. Basing my plan of treatment on this physiological fact, I support the abdominal walls with a broad adhesive strip so applied as to approximate the umbilical region. To the umbilicus I adjust a compress smaller than the opening. This prevents protrusion without interfering with the closing process.

Dr. J. G. HEILMAN narrated the history of an aged colored man who suffered from an inguinal hernia, which became strangulated. Anæsthesia with chloroform did not render reduction practicable. Drs. E. R. Stone and L. B. Hall were called in, and, at the suggestion of the former, about a fluidounce of a straw-colored fluid was evacuated from the sac by means of an ordinary hypodermatic needle. After this procedure the hernia was easily reduced, and a favorable result followed.

Dr. L. BREWER HALL directed attention to the high prices asked by instrument-makers for trusses, and inquired if there was any way by which the poor could get them at more reasonable rates.

Dr. WALKER, in reply to Dr. Hall, explained how a ten-dollar truss could be obtained from a Chestnut Street dealer, under such circumstances, for seven dollars.

Dr. ROBERTS, in closing the discussion, said, "In my opinion, the mortality in cases of hernia is due to two causes,—first, too great an effort at taxis, whereby inflammatory changes are occasioned and surgical treatment complicated and endangered; second, delay. If gentle taxis fails, herniotomy should promptly be performed. The conditions of delay and experimental manipulation by students in hospitals render hospital statistics of little value. In one case of double hernia (*i.e.*, an inguinal and femoral hernia on the same side) I succeeded in maintaining them in place by an inguinal truss so depressed as to occlude both the external abdominal ring and the femoral ring. In umbilical hernia I apply a compress moulded of wax instead of the coin. It is more readily adapted to the size of the orifice and kept in close apposition."

Dr. STONE'S paper was then read (see page 309).

DISCUSSION ON THE MANAGEMENT OF LABOR.

Prof. J. B. WALKER agreed so fully with the points advanced by Dr. Stone that discussion seemed almost superfluous. He believes that the method described of hooking the placenta from the uterus with the finger is

one in which there is considerable danger of introducing disease-germs, because of carelessness and want of cleanliness on the part of accoucheurs. Therefore, for a general rule, it should be taught that expression should be persevered with until the placenta is forced into the vagina. Hot injections of pure water he believes to be especially useful, and the dangers following this practice, so emphatically declared by hospital experience, are a myth, and should not deter private practitioners from their employment. In hospitals, where one syringe serves for many cases, there is danger, but in private practice, where new instruments can be had and their use limited to the individual, danger does not obtain; on the contrary, the risk of infection by a nurse whose clothing may have been subjected in previous cases to septic poison is by this plan of treatment greatly diminished. Again, these injections of hot water overcome inertia. They exert a powerful oxytocic influence and promote favorable physiological processes. If these injections during the lying-in period fail to cause firm uterine contraction, quinia should be administered.* The use of ergot in the third stage of labor is a moot question possessing so much of *pro* and *con* that I do not feel in a position to state invariable rules regarding its employment.

Dr. E. MONTGOMERY thoroughly indorsed Dr. Stone's paper. He calls especial attention to the great importance of resorting to diagnosis of the presentation and position by external palpation performed during the last month of gestation. He has recognized faulty conditions and been able to correct them, thus securing the advantages of a normal labor to both mother and child. He makes it a rule to visit his patients during their last month, diagnosticate the position, and at the same time ascertain the general condition. The unusually small number of lacerations of the perineum is a conspicuous feature in the doctor's experience, and argues strongly the skill attained and the commendable care with which he conducts his cases. The position described in which the obstetrician should place himself in order to command better control of the patient during the period at which the head and shoulders are being extruded is one of great advantage, and one which enables the attendant to avert this lesion in many instances. Cervical lacerations are of very frequent occurrence. Many spontaneously heal to such a degree as to be practically cured. Traction on cord combined with fundal compression is my method of delivering the placenta. A twisting movement is always a valued resort, it converts the membranes into a rope like mass, which reduces the possibility of tearing and leaving portions within the uterus to a minimum, and maintains firm uterine contraction, which is always followed by excellent results. Ergot should not be administered as a routine method, as many conditions may be present the treatment of which the effects of this drug would compromise: adherent placenta is an instance. Regarding anæsthesia, the prompt and transitory effects of ethyl bromide, and its freedom from danger when used as obstetric conditions demand, render it an especially valuable drug. It does not interfere with uterine contractions, is not followed by inertia or unpleasant effects. Several instances of sepsis have occurred in my private practice that cannot be traced to hospitalism or to attendance upon diseases that supply the septic poison, as scarlatina, erysipelas, etc. As a consequence, he always employs corrosive mercuric chloride, cleansing his hands with it before making the necessary examinations and manipulations. After accouchement, he directs the vulva to be covered with a pad saturated with a solution of the chloride. This is changed about thrice in twenty-four hours. Since resorting to this he had not had one case of septic disease occur in private practice, and in that hot-bed of septic poison, the Philadelphia Hospital, where every year he formerly had many cases of puerperal fever, but two cases occurred. The practice of injecting the vagina in a hospital is apt to serve as a means of introducing sepsis.

Dr. ROBERTS called attention to pellets of corrosive sublimate, prepared by a pharmacist, that serve as a convenient form for carrying and having for use this remedy. He has not had experience with ethyl bromide in light anæsthesia, and cannot say whether or not, used in this way, it is a safe drug. In the profound anæsthesia required in surgery his experience compels him to regard the drug as not free from danger.

Dr. STONE, in closing the remarks, detailed the conditions of laceration and the results of non-surgical but careful treatment, which, as the results were practically those of cure, rendered the percentage-report apparently unusually favorable.

* I have never in private practice seen a single case of septic disease induced by injections. Hot water alone is all that is necessary. In one instance, where the phenomena of sepsis were developing and decidedly established, the symptoms were promptly relieved by hot water alone. J. B. W.

CHICAGO GYNÆCOLOGICAL SOCIETY.

REGULAR MEETING, DECEMBER 19, 1884.

The President, H. P. MERRIMAN, M.D., in the chair.

DR. W. H. BYFORD read a paper entitled

A CASE OF MURAL PREGNANCY.

The history of the case was obscure. The patient, 28 years old, married seven years, had one child, six years old. She supposed

that she became pregnant for the second time in February, 1883. In April, after being fatigued, she had hemorrhages, which continued until May 9, about four weeks. October 14 a discharge of yellow fluid, about one gallon in quantity, occurred. A putrescent, sero-sanguineous discharge followed, continuing three months. January, 1884, a large brownish mass with very fetid odor was expelled. After this event menstruation occurred until July. In May she was quite large and had bearing-down pains. She entered the hospital October 6, 1884. She was tapped October 18, and about four quarts of thick, tenacious fluid, resembling the fluid of an ovarian cyst, were removed. This fluid coagulated on the addition of nitric acid and on boiling. Assisted by Dr. R. Filley, a microscopical examination was made, with negative results. The "Drysdale" cell was not found. Laparotomy was performed, and a fœtus with placenta was removed without hemorrhage or difficulty. In order to secure perfect drainage it was considered best to remove the uterus. The operation was performed on October 30. The patient did not react, but died within twenty-four hours. Prior to the operation the patient was extremely reduced by her protracted sufferings. Dr. Byford in a similar case at the present time would elect the vaginal operation. The specimens removed from this woman were exhibited as supporting the diagnosis of mural pregnancy.

This was the second case of mural pregnancy that had come under the reader's observation within a period of five years. The first case was reported to this Society some time ago. The patient was in labor and moribund when Dr. Byford saw her. She had been in labor until exhausted. There was no difficulty in making a diagnosis. The head was low down in the pelvis, almost on the perineum. The os uteri was wellnigh inaccessible behind and above the symphysis. The body of the uterus, somewhat enlarged, could be felt in the lower and anterior part of the abdomen, attached to the tumor containing the fœtus. The fœtus could be felt through the abdominal walls, surrounded by a thick involucrum apparently as thick as the uterine walls. Fœtal extremities could be distinguished. When dissected, the sac in which the fœtus was contained was found to consist of a thick layer of muscular fibres. These fibres were directly continuous with those of the uterus. The tubes and ovaries lay upon the sides of the lower portion of the sac. The fecundated ovum had made its way down the tube, became lodged in a diverticulum in the uterine wall, and was gradually extruded into the cavity of the abdomen. The fœtus was thus developed within the uterus, though not within the uterine cavity. The resemblance to normal pregnancy was great in the presentation and position of the fœtus, deep down in the pelvic cavity, behind the vagina. The head in this case was fixed by the concentric contraction of the uterine fibres by which it was surrounded, and could be easily outlined as it lay thus covered by the posterior vaginal wall.

The specimen presented is much less perfect than the one described, because of the numerous effects wrought upon it during the great length of time it remained in the maternal body and the mutilation consequent upon enucleation.

The treatment of these cases ought to be considered apart from that of extra-uterine pregnancy at term. It is always a matter of special consideration, in connection with each case as it presents itself, whether or not the removal of the fœtus at term in extra-uterine gestation should be attempted. The dangers of laparotomy are greatly increased by the inability to remove the placenta. The surface to which it is attached has no contractile power, so that the divided vessels are left patulous. If hemorrhage does not immediately prove fatal, the blood is a source of sepsis that must almost certainly destroy the patient. Laparotomy would more likely prove successful if performed some days after the death of the child. In these cases of ectopic or interstitial uterine pregnancy the fœtus may be easily removed through the vagina. An incision made through the posterior vaginal wall would completely uncover the presenting part and enable one to apply the forceps or attack it with the perforator and crotchet as in ordinary labor. After the removal of the fœtus the placenta should be allowed to separate spontaneously.

Since writing this report, Dr. Byford had seen a case reported in the *Annales de Gynécologie*, July, 1884, occurring in the practice of Mr. Matheson, of England, illustrative of the execution of this plan. The case was reported to the London Obstetrical Society under the title "Extra-Uterine Pregnancy: the Extraction of a Living Fœtus through the Vagina." The child was slightly asphyxiated, but survived. A sponge saturated with perchloride of iron was introduced into the sac after removal of the placenta. The mother recovered. It would seem that the author did not suspect his case to be one of interstitial pregnancy. During the discussion that followed, only one of those present expressed the opinion that it was of that variety. Mr. Griffith thought it was either interstitial pregnancy or one in which the fœtus was developed in one portion of a double uterus.

A general discussion followed the reading of the paper, in which Drs. Edward Warren Sawyer, E. C. Dudley, J. H. Etheridge, A. Reeves Jackson, John Bartlett, W. W. Jaggard, Charles W. Earle, and Dr. Byford participated. Some difference of opinion being expressed, the specimen was referred for ex-

amination to a pathologist, not a member of the Society, for report at the next regular meeting.

Dr. Etheridge presented a specimen of a placenta containing calcareous deposit from a woman whose pregnancy had extended to two hundred and ninety-two days.

W. W. JAGGARD, M.D.,
Secretary.

REVIEWS AND BOOK NOTICES.

CONVERSATIONS BETWEEN DRS. WARREN AND PUTNAM ON THE SUBJECT OF MEDICAL ETHICS: WITH AN ACCOUNT OF THE MEDICAL EMPIRICISMS OF EUROPE AND AMERICA. By FRANK HASTINGS HAMILTON, M.D. Bermingham & Co., New York, 1884.

The vexed question of the utility of the National Code of Ethics has been so diligently urged in New York State as, in effect, to divide the profession of the Empire State into two partisan camps, with a state of feeling existing between the two which is truly deplorable and highly discreditable. It has led to the establishment of rival county medical societies and a rival State medical society, by which the breach between the two parties will be perpetuated. One of the peculiarities of the new-code, or no-code, advocates is their refusal to discuss medical ethics from any higher point of view than a purely business standard, and consequently they are impervious to most of the arguments of their opponents. Were this not the case, we think that this admirable publication of Dr. Hamilton and the writings of Drs. Flint and Squibb would be sufficient to re-establish the authority of the Code. The series of interesting supposed conversations of Drs. Putnam and Warren completely cover the ground upon which the Code is founded, and fully maintain its teachings and answer the objections which have been raised by its critics; but, in conclusion, the author suggests that certain amendments might be made which, without altering its spirit, would increase its efficiency and acceptability.

YEAR-BOOKS OF MEDICAL PROGRESS.—A YEAR-BOOK OF THERAPEUTICS FOR 1883, Edited by ROYAL W. AMIDON; and A YEAR-BOOK OF SURGERY FOR 1883, Edited by CHARLES H. KNIGHT, M.D. G. P. Putnam's Sons, New York, 1884. Cloth, 8vo.

These handsomely-printed volumes furnish a well-selected and classified digest of medical and surgical contributions to the literature of the science in the year 1883. The matter is conveniently arranged for reference, and, being well edited, the works are both convenient and useful. To those who are engaged in the almost vain effort to keep up with current medical literature these year-books furnish comfort and satisfaction, as they represent an annual taking of stock, and a sifting of the wheat from the chaff. The surgical volume has no index, but its table of contents and careful arrangement under sub-headings may render an index unnecessary. An index of authors would facilitate reference, and might sometimes prove very useful. Bibliography has not been attempted to any great extent, as that is furnished by the "Index Medicus," to which these volumes are useful supplements.

THE ELEMENTS OF PATHOLOGY. By EDWARD RINDFLEISCH, M.D. Translated from the First German Edition by W. H. MERCUR, M.D.; Revised by JAMES TYSON, M.D. Philadelphia, P. Blakiston, Son & Co., 1884. 12mo, pp. 263.

The subject-matter of this work is an outline sketch or groundwork of pathology, without having any pretensions as a text-book. Having this in mind, the various sections of the (*a*) general part, on (1) the Local Outbreak of Disease, (2) the Anatomical Extension of Disease, (3) the Physiological Extension of Disease, followed by (*b*) Animal Disturbances, and the special part, including Traumatic, Parasitic, and Infectious Diseases, Defective Development and Growth, Diseases due to Overwork, and Diseases of Involution, may be read with interest and profit. The views of Rindfleisch will command attention, if not assent, in every particular, and it is not to be expected that his views will command universal acceptance. It is therefore a book more for the practitioner than the beginner, and presupposes some familiarity with the text-books upon the subject. The work of translation has been well done, although we notice some obscurities of expression which might be improved.

THE PHILADELPHIA MEDICAL REGISTER AND DIRECTORY FOR 1884–5. Edited by WILLIAM B. ATKINSON, A.M., M.D. Collins, Printer, 1884.

This well-known physicians' directory, issued under the direct supervision of Dr. Atkinson, preserves its characteristic features which have made it such a useful work of reference in the past, and presents some new ones which enhance its value.

THE *Archives of Medicine* for December contains the editorial announcement of the discontinuance of its publication with the present number, in view of the general preference for periodicals appearing at brief intervals able to furnish scientific material and news with greater promptness. We regret to lose the *Archives* from our exchanges, especially as the last issue contains so much valuable and interesting original material. A general index to the twelve volumes of the *Archives* is also contained in this number.

GLEANINGS FROM EXCHANGES.

Exfoliation of the Cochlea without causing Deafness.—The *Lancet* Vienna correspondent writes: The loss of the cochlea, according to the ingenious researches of Helmholtz, is considered to be equivalent to the loss of hearing-power. A case, however, which Professor Grüber demonstrated on December 12, at the meeting of the Society of Physicians in Vienna, would seem to go far towards refuting this view. The case occurred in a lad aged 14, who had been ailing for four years, and who was admitted into Professor Grüber's wards last November. It was stated that the patient suffered from an old otorrhœa with polypus of the left ear. As the patient experienced great pain, and as paralysis of the left nervus facialis existed, Professor Grüber had no hesitation in entirely removing the polypus, and in doing so came upon the cochlea in a state of necrosis. Since the operation the patient has felt better, his pains have ceased, and the paralysis of the nervus facialis has nearly disappeared; but, strange to say, the lad's affected ear has regained its power not only of recognizing sounds, but of distinguishing musical notes. Only two similar cases would seem to have been recorded. One was observed by Dr. Cassels at Glasgow, the other by Dr. Christinneck in the clinic of Professor Schwarze at Halle. Professor Grüber did not enlarge on the features of this interesting case, but it certainly affords food for suggestive thought in reference to treatment of diseases of the ear. Heretofore the labyrinth was considered a sort of *noli me tangere*, but now we see that the entire cochlea may be missing and yet the aural powers be retained. On the other hand, it is not yet quite certain whether in the above case paralysis of the auditory nerve may not eventually occur.

Tricuspid Stenosis.—In reviewing the general facts of tricuspid stenosis *à propos* of a case of his own, M. Chauffard points out that the only two signs in life we are likely to get of its presence are (1) the existence of extreme venous congestion in the neck without a venous pulse, and (2) presystolic and systolic murmur which culminates over the junction of the xiphoid cartilage with the sternum, and which is by this position and its harshness and superficiality to be distinguished from the murmur of mitral stenosis. With regard to the general conditions of tricuspid stenosis, M. Chauffard is in agreement with nearly all authors,—viz., that it is almost always found in women, in forty-one cases out of forty-six (Fenwick) in adult life, and accompanied by other endocardial lesions, especially by mitral stenosis. In only half the cases does rheumatism seem to have been coexistent; it has been the result of a slow endocarditis, wide-spread and not vegetative, which has glued the bases of the valves together and made them contract. In only one case does it seem to have been congenital. (*Revue de Médecine*, July, 1884).—*Practitioner.*

Trophoneurosis (?) of the Testicle.—A case which may possibly be an example of a trophoneurosis is recorded by M. Lemonnier in *La France Médicale* of December 25. The patient was a young man aged 19, who sustained severe injury to the skull after a fall from a height of about six feet. Hemiplegia of the right side, and rapid atrophy of the testicle and of the right upper limb, are the chief phenomena recorded. There was considerable disturbance of consciousness, but ultimately the patient appears to have recovered to a large extent. The hemiplegia was probably dependent upon compression by blood poured out as the result of the fracture of the base of the skull. No other conditions seem to have been present to account for the rapid wasting of the arm or testicle. Nélaton and others have spoken of the possibility of atrophy of the testicle resulting from causes acting at a distance.—*Lancet.*

MISCELLANY.

Some Recent Decisions on Medico-Legal Matters.—The records of the courts are full of cases of interest to physicians, and a knowledge of them will often be of great value when called upon to appear as parties in actions or as expert witnesses in cases where other persons are litigating. Of the most recent cases the following are of general interest:

In an Indiana court a physician was charged with rape upon the person of a female patient, and the crime seemed to be proved, but the question arose whether the guilty party could not escape the highest penalty because of a possible consent on her part. There was no evidence produced to warrant the claim of a consent. On this point the court said, "If the jury believed, as they might well have done under the evidence, that the appellant as a physician obtained possession and control of Rebecca's person, under her mother's command, for the purpose of making a further examination of her alleged disease of the womb, and not for the purpose of sexual intercourse, and that she never in fact gave her consent, through fraud or otherwise, to the sexual connection, then it seems to us that the appellant was lawfully convicted of the crime of rape." The verdict of the jury was therefore affirmed.

In a Michigan case, the charter of a city obliged the common council to take measures for the preservation of the public health, and

in carrying out this requirement a nurse was employed to attend a smallpox patient. A State law requires patients in the hospitals, if pecuniarily able, to pay for the services rendered them. The nurse faithfully attended to the case, and presented her bill to the city authorities who had hired her. They declined to pay, saying that she must sue the patient. She refused to take this course, but brought suit against the city, and the courts sustained the action and obliged the city to pay. The opinion of the judges on appeal contains the following comment: "Individuals would not be willing to provide necessaries, and serve as nurses and assistants, at the instance of the public, if compelled to collect their pay of the patients or their relatives. The public is first and immediately responsible, and the intent of the statute is to enable the public to obtain reimbursement from those who ought to sustain the expense. The plaintiff hired herself to the city. She trusted the city, and no one else."

In another Michigan case, a tramp was run over by a locomotive in a railroad-yard. A surgeon was summoned to help him, and sent a message to the superintendent and asked if he should do so. The superintendent answered, "Yes." Nothing was said about pay, and, in fact, the superintendent had no authority to bind the railway-company to pay for surgical aid. Under these circumstances the surgeon sued the superintendent, under the theory that he was personally liable. The court held, however, that there was no contract between them of such a character as to make the superintendent liable. The effect of this decision is to exempt both the railway-company and the superintendent from liability, and to oblige the surgeon to look to the tramp for compensation. As "tramps" usually are not men of means, the surgeon probably has been obliged to charge up his services to a general benevolence account.

In a Kansas case, where physicians were called to give expert testimony, the judge charged the jury that such testimony "should be received and weighed with caution," and the question was whether this was a proper direction or not. On this point the court said, "The testimony of experts is to be considered like any other testimony; it is to be tried by the same tests and receive just as much weight and credit as the jury may deem it entitled to when viewed in connection with all the circumstances. We think this is probably as good a general rule as any that could be adopted. . . . While many courts speak disparagingly of some kinds of expert testimony,—that with regard to handwriting, for instance,—yet we think that all courts hold that the testimony of competent medical experts is entitled to great respect and consideration. In the present case, we think the expert testimony of the physicians and surgeons, who were in fact appointed by the court, and who made a personal and professional examination of the plaintiff's eyes, is entitled to great consideration, and that the court below erred when it instructed the jury that such testimony should be 'received and weighed with caution.'"

In Germany the papers report a recent case where a physician used the old methods of treating wounds, instead of the modern antiseptic dressings, and the patient died under circumstances making it probable that if a different treatment had been adopted his life would have been saved. The physician was sued for malpractice, and convicted, the court holding that "every practitioner should keep himself informed on the accomplished progress of science, and have an exact knowledge of modern systems of treatment. If these had been employed, the patient's life might have been saved: hence the liability for negligence."

Life-Saving from Drowning by Self-Inflation.—Dr. Henry R. Silvester (*Lancet*) makes the ingenious suggestion that the inflation of the cellular tissue of the upper part of the body can be accomplished by making an opening in the mucous membrane, at the junction of the gums and cheek, with a knife or sharp piece of wood, and then filling the mouth with air and blowing it forcibly through the opening into the fascia. Sufficient inflation can be obtained in three minutes to support the body in the water.

The Annual Meeting of the Medical Jurisprudence Society was held January 13. The following officers were elected for the ensuing year:

President.—George W. Biddle, Esq.

Vice-Presidents.—John J. Reese, M.D., and William N. Ashman, Esq.

Recorder.—J. Solis Cohen, M.D.

Secretary.—Henry Leffmann, M.D.

Treasurer.—Hampton L. Carson, Esq.

Burning of an Insane Asylum.—The daily papers contain an account of another horrible calamity, the burning of the Illinois State Insane Asylum at Kankakee on the 17th instant, in which some twenty unfortunate patients perished. The newspaper report blames the Legislature for the niggardly appropriations, which prevented the proper safeguards and fire-escapes from being provided.

The County Medical Society gave a reception in honor of the retiring President, Dr. William M. Welch, on the 14th instant, on which occasion Dr. Welch read a valuable report upon the early history of vaccination in this country as his annual address.

A Good Appointment.—Dr. Edward N. Brush, of the Utica Asylum, and formerly of Buffalo, has been appointed Assistant Physician in Charge of the Male Insane Department of the Pennsylvania Hospital.

NOTES AND QUERIES.

AN OLD FORM WHICH MIGHT WELL BE REVIVED.—To the kindness of Prof. Osler we owe the following copy of an indenture which was in use in the early part of the century in England, and which seems of sufficient interest to warrant publication. We commend it to the State Medical Society.

"*This Indenture Witnesseth*, That Edward O——, of the town of Falmouth, in the county of Cornwall, by and with the consent of his Father, doth put himself Apprentice to James X., of said town of Falmouth, Surgeon, to learn his Art, and with him, after the Manner of an Apprentice, to serve from the 2nd day of March, Eighteen hundred and Eleven, the full End and term of five years from thence next following, to be fully complete and ended.

"*During* which term the said Apprentice his Master faithfully will serve, his secrets keep, his lawful commands everywhere gladly do. He shall do no damage to his said Master, nor see to be done of others, but to his Power shall let or forthwith give warning to his Master of the same. He shall not waste the Goods of his said Master, nor lend them unlawfully to any; he shall not commit fornication nor contract Matrimony within the said term. He shall not play at Cards or Dice-Tables, or any other unlawful Games whereby his said Master may have any loss with his own goods or others during the said term, without the license of his said Master. He shall neither buy nor sell; he shall not haunt Taverns nor Play-houses, nor absent himself from his said Master's Service day or night unlawfully, but in all things as a faithful apprentice he shall behave himself towards his said Master and all his during the said term.

"And the said James X., for and in consideration of the sum of forty pounds lawful money of Great Britain, one moiety of which to him in hand paid, the other moiety when half the term is complete, the said Apprentice in the Art of Surgery and Physic which he useth by the best means that he can shall teach and instruct or cause to be taught and instructed. Finding unto the said Apprentice sufficient meat, drink, lodging, and all other necessaries during the said term.

"And for the true performance of all and every the said Covenants and Agreements, either of the said Parties bindeth himself unto the Other by these Presents.

"In witness whereof, the parties above named to these Indentures interchangeably have put their hands and seals this 22d day of March, and in the fifty-first year of our Sovereign Lord George III., by the Grace of God of the United Kingdom of Great Britain and Ireland King, Defender of the Faith, and in the Year of our Lord one thousand eight hundred and eleven.

"Signed, sealed, and delivered in the presence of
"I. GRIFFIN."

Three-penny stamp (on the paper).
One pound ten shilling stamp (to the indenture).

OBITUARY.

BENJAMIN FRANCIS SILLIMAN, M.D.—At his residence in New Haven, Prof. Silliman died on the 14th inst., of heart-failure, consequent upon progressive cardiac lesion. One of the most honored pioneers of American science, his labors in connection with the Scientific School of Yale College, which owed its inception to his energy and enthusiasm, and his share in the establishment of the National Academy of Medicine, have rendered him eminent in the annals of science in this country, while his contributions to literature have made his name familiar as household words.

Born in New Haven in 1816, he entered Yale in 1833, and was graduated in 1837. Soon afterwards he fitted up a laboratory for instruction in analytical chemistry and mineralogy, which was afterwards developed into the Yale Scientific School, recognized and adopted as a fourth department of Yale College by the authorities in 1847. In 1845 Dr. Silliman delivered what was probably the first series of lectures on agricultural chemistry in the United States, and in 1849 he was called to the Medical Department of Louisville University, in which he took the chair of Medical Chemistry and Toxicology. It was here that he formed a friendship with Prof. Gross which continued through life. He was one of the guests at the dinner given to Prof. Gross by the profession of this city in honor of his completion of the fifty-first year of the practice of medicine.

In 1854, Prof. Silliman, leaving Louisville, returned to New Haven to accept the chair of Chemistry in the Academical and Medical Departments of Yale College, in which he was the successor of his father. His collection of mineralogical specimens, obtained by him in his early travels across the continent and subsequently enriched by careful selection, was presented by him to Cornell University in 1868.

Dr. Silliman's works, The First Principles of Physics and of Chemistry, were adopted by schools all over the country, and are still valued as text-books, while his editorial labors in connection with the *American Journal of Science and Arts*, as well as his many papers on scientific subjects, have left an indelible impression upon American science. He received the honorary degree of M.D. from the University of Charleston, South Carolina, in 1849.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 4, 1885, TO JANUARY 17, 1885.

HEAD, JOHN F., COLONEL AND SURGEON.—Retired from active service by operation of law on January 9, 1885, under provisions of Act of Congress approved June 30, 1882. S. O. 7, A. G. O., January 9, 1885.

PROMOTIONS.

LIEUTENANT-COLONEL JOHN CAMPBELL, SURGEON.—To be Surgeon, with rank of Colonel, December 7, 1884.

MAJOR R. H. ALEXANDER, SURGEON.—To be Surgeon, with rank of Lieutenant-Colonel, December 7, 1884.

CAPTAIN HENRY MCELDERRY, ASSISTANT-SURGEON.—To be Surgeon, with rank of Major, December 7, 1884.

APPOINTMENT.

JEFFERSON R. KEAN.—To be Assistant-Surgeon, with rank of First-Lieutenant, December 8, 1884.

MCKEE, J. C., MAJOR AND SURGEON.—Ordinary leave of absence still further extended four months, on surgeon's certificate of disability. S. O. 6, A. G. O., January 8, 1885.

BENTLEY, EDWIN, MAJOR AND SURGEON.—Leave of absence extended two months. S. O. 8, A. G. O., January 10, 1885.

TREMAINE, W. S., MAJOR AND SURGEON.—Relieved from duty at Fort Porter, New York.

GIRARD, A. C., CAPTAIN AND ASSISTANT-SURGEON.—Ordered for duty at Fort Porter, New York.

APPEL, D. M., CAPTAIN AND ASSISTANT-SURGEON.—Ordered for duty at Plattsburg Barracks, New York.

GIRARD, J. B., CAPTAIN AND ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort Schuyler, New York Harbor.

HAVARD, VALERY, CAPTAIN AND ASSISTANT-SURGEON.—On being relieved at Fort Schuyler, authorized to avail himself of leave of absence (four months).
S. O. 8, Department of the East, January 12, 1885.

ELBREY, F. H., CAPTAIN AND ASSISTANT-SURGEON.—Sick-leave still further extended six months, on surgeon's certificate of disability. S. O. 9, A. G. O., January 12, 1885.

SHANNON, WILLIAM C., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Bridger, Wyoming, and assigned as attending surgeon at Headquarters Department of the Platte. S. O. 2, Department of the Platte, January 5, 1885.

ROBINSON, S. Q., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty at Portland, Oregon, from December 17, 1884. S. O. 206, Department of the Columbia, December 22, 1884.

APPEL, A. H., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect on or about January 7, 1885 (Madison Barracks, New York). S. O. 268, Department of the East, December 31, 1884.

WALES, P. G., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Vancouver Barracks, Washington Territory, and ordered to return to his proper station, Fort Cœur d'Alène, Idaho. S. O. 204, Department of the Columbia, December 19, 1884.

LIST OF CHANGES OF STATIONS OF NAVAL MEDICAL OFFICERS FROM JANUARY 3, 1885, TO JANUARY 10, 1885.

Surgeon J. W. Ross, detached from the "Monongahela," for treatment at Naval Hospital, New York.

P. A. Surgeon HOWARD WELLS, detached from Naval Hospital, Philadelphia, Pa., to the "Monongahela."

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 7, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON THE REACTIONS OF DEGENERATION.

Delivered before the Fourth-Year Class of the University of Pennsylvania

BY JAMES HENDRIE LLOYD, M.D.,

Instructor in Electro-Therapeutics in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—I wish to-day to review in part the subject over which we have already gone, and to still further enlarge upon the law of electrical reactions. These are really the foundation of the science of electro-therapeutics. The names of Erb and Brenner in Germany are especially identified with this subject, while De Watteville in England has written the most lucid explanation of these reactions.

The first subject to be considered is the phenomenon known as electrotonus. Electrotonus refers to the condition into which a nerve passes upon having applied to it the poles of a battery. In this condition the nerve is found, under the cathode or negative pole, to become very much increased in its irritability, while under the anode or positive pole its irritability is lessened. In other words, the cathode or negative pole is an irritating agent, and the anode or positive pole is a depressing agent. It is still further found that on the removal of the anode there is then a slight increase of the irritability. Where formerly there has been depression there is a rebound or recoil, causing an increase of irritability.

When I speak of any agent as being irritating to a motor nerve, it is to be understood that that irritation is exhibited by movement of the muscle to which the nerve is supplied. My present remarks apply to nerves as found in the physiological laboratory, isolated from all surrounding tissues. The portion of nerve between the two poles, provided the poles are applied at some distance from each other, is neutral, and this is an important fact to remember. It is only under the poles that this change in irritability is observed, this being exhibited under certain conditions by contraction of the muscular tissue to which the nerve is distributed. To put the subject in a concise and epigrammatic form, a recent writer has said, "The nerve is aroused in passing from a lower to a higher state of excitability."

It was formerly the custom of physiologists and also of therapeutists to regard altogether the *direction* of the current in their experiments and applications to disease: the direction was made all-important. When the current was passed downward in the direction of the nerve it was called the direct current, and when it was passed up the nerve the inverse current. The difficulty was that the subject became so involved in contradictions and such diverse results were obtained that it was difficult to elaborate any satisfactory law from this mass of contradictory facts. Under these circumstances it remained for Pflüger to elaborate from this confusion a systematized law, to which we shall come in due course of time. In the mean time we can again return to the fact that it is not the direction of the current, for, as I have said, the portion of nerve between the two poles is unaffected unless the poles are brought so close together that their mutual influences overlap. This shows that it is not the direction of the current which causes the excitation of the nerve, but that it is what is called the polar influence, possibly due to molecular change occurring under the individual electrodes, which causes muscular contraction as the nerve passes from a lower to a higher excitation.

It will not be necessary for me to go into all the details of the demonstration of Pflüger, but from his experiments and observations he was enabled to elaborate a series of laws, the whole point of which is simply this: That the phenomena displayed in the muscular tissue by contraction, and the condition of irritation of the nerves, depend not on the direction of the current, but (1) upon the pole whose influence is felt, (2) upon the strength of the current, and (3) upon the fact whether the current is made or broken. These are the three elements of the proposition. These results are constant and always capable of application, whereas in the old time one physiologist or therapeutist would assert that the descending current was the one to be used in order to produce certain

effects, while another would assert that the ascending current was the proper one to be applied under such circumstances.

I have told you, when speaking of electrotonus, that when a nerve is under the influence of an electric current its excitability is increased at the negative pole and depressed at the positive pole. The result of this is that the first stage of excitability which we have in a nerve, according to the laws of electrotonus and of Pflüger, results from the closure of the cathode, for this is simply saying that an exciting agent is applied to the nerve, just as though it were stuck with a pin or touched with a hot iron. The cathode raises the nerve from a lower to a higher state of irritability. The mildest current which will produce any reaction is that which first causes contraction at the closure of the cathode. This is expressed as follows: Ca C C, in which Ca stands for cathode, C for closure, and the second C for contraction.

What would be the second natural deduction from the laws of electrotonus and from Pflüger's observations? The nerve is excited in passing from a lower to a higher state of irritability. The anode depresses excitability, and therefore applying the anode will not cause contraction, but rather the reverse,—*i.e.*, it puts the nerve in a condition in which it is not so readily excited. If, however, the anode is applied for a minute and then taken away, there will be a rebound from the lower to a higher state of excitability, so that the second reaction, which, however, is not so strong as the cathodal closure, is anodal opening contraction. It is thus expressed: An O C. Bear in mind that I am still speaking of physiological experiments where the nerve is isolated from surrounding tissues.

The next reaction which we have will require a little further demonstration. According to the laws of Dubois-Raymond, the reaction of a nerve to electricity depends not only upon its passing from a lower to higher excitability, but also upon changes in the density of the current: that is, it is not caused by the absolute amount of electricity passing through the nerve at any particular moment (*i.e.*, the absolute density), but it is caused by the change of density of that current from one moment to another. For instance, take a strong current running through a nerve, and take a second nerve under the same circumstances and transmit a mild current through it. There will be no reaction in either case while the currents are running. If, however, the current is made or broken, the density of the current is rapidly changed and reaction is produced. It is not the strength of the current so much as the sudden changes in strength which causes the reaction. A mild current passing through the nerve produces no reaction, but if the current is suddenly increased a reaction is produced.

Let us now consider the application of the current to the nerve under ordinary circumstances, for instance, as found in the arm of a man, covered with skin, fat, fascia, blood, and muscular tissue,—these being more or less good conductors, some of them, as the blood, being even better conductors than the nerve itself. It is impossible in applying electricity under such circumstances to so apply it that the current will be completely confined to the nerve-trunk. In other words, there is diffusion of the current from the electrodes, much of it, however, striking the nerve and passing through it *transversely* in a fan-like shape. You recall what it is that makes the positive and the negative poles. That is the positive where the electricity first impinges upon the nerve, and that is the negative where it leaves the nerve. The result of this is that under every electrode we have in the nerve not only the electricity represented by the sign of that particular electrode, but also the electricity of the opposite sign. We have also to recollect another condition. According to the law of Dubois-Raymond, it is the difference in density which determines the muscular contraction. Now, in the case supposed, the electricity from the positive pole flows into the nerve in a comparatively narrow stream. Where it enters the nerve it is dense. Where it leaves the nerve it does so in a fan shape, and is less dense. The electricity which enters the nerve immediately under the electrode is termed the actual pole by De Watteville, and has much the greatest density, while that which leaves the nerve is termed the virtual pole, and has much less density.

I have told you that the strongest reaction was produced by closure of the cathode, and that the next strongest was produced by opening of the anode, because in both the same thing was produced: the nerve passed from a lower to a higher

state of excitability. What, however, do we find in actual experience when electricity is applied to a patient? We find that we do get the strongest result from cathodal closure, but by no means always the next strongest reaction from anodal opening. The anodal *closure* contraction is quite as strong as that of anodal opening. How is this apparent contradiction to be explained? With anodal closure we get quite a strong contraction, and yet we know that the anode causes depression of excitability. The explanation is as follows: When we make anodal closure we get really not anodal closure, but we get the influence of the cathode which is exerted on the *opposite side* of the nerve, or in what De Watteville calls the *peripolar* area. It is exerted where the density is much less, where the electricity is leaving the nerve. The consequence is that you have the cathode acting under anodal closure, but acting under a disadvantage, and as a result it does not give as strong a contraction as with the cathode on the skin. The peri-polar zone probably does not represent more than one-fourth the density. In illustrating this point a simple mathematical problem, somewhat after the manner of Erb, may be made use of. Ca is taken as equal to 4, the anode as equal to 2. The polar zone, *or near side*, where the electricity is much denser, equals 4, while the peri-polar zone, where the electricity is less dense, equals 1. The terms of the formula are therefore as follows:

Ca = 4.
An = 2.
Pz = 4.
pPz = 1.

If the cathode is acting in the polar zone, the formula is $4 + 4 = 8$: that is, the density added to the excitant. If, however, the anode is acting in the peripolar zone, then $2 + 1 = 3$. These figures do not indicate the relative intensity, but are simply used for the purposes of illustration.

It is these demonstrations which enable us to understand many things about electrical reaction. They enable us to understand why it is that we get any contraction by closure of the anode. It is because we really have the cathode acting in the peripolar zone, or the virtual cathode instead of the actual anode.

The last contraction which we have is from opening of the cathode, represented by Ca O C. The cathode being an irritant, it is difficult to understand why taking it off should produce a contraction. It is easy to see how applying an irritant will cause contraction, but it is not so easy to see how the removal of an irritant will also produce contraction. It is only with a strong current that this can be obtained. The fact is that under these circumstances the cathode is not acting, but that you have an anodal opening in the peri-polar zone. It is of course acting at a great disadvantage, and the contraction is very slight, even with currents which are almost unbearable.

This is about all the demonstration which it will be necessary to give of the laws of electrical reaction, but I wish to give one illustration of their value. If you place the electrode on the median nerve, for instance, and make cathodal closure, there will be contraction of a certain set of muscles. Now, if anodal closure be made, you will possibly see a different set of muscles move, although the electrode has not been moved. The explanation of this is that, in the first instance, the cathode is acting in the polar zone, and consequently the upper fibres are especially affected. In the second instance, when anodal closure is made it is really a virtual cathodal closure, the cathode acting in the peri-polar zone, and a different set of nerve-fibres are irritated and a different group of muscles are thrown into contraction.

Take, for example, what are known as voltaic alternatives. If you have the electrode upon the nerve-trunk and break and make the current, you will find that you have the customary reaction; but if instead of simply making and breaking the current you suddenly swing it from anode to cathode, a much stronger reaction is obtained. Why is this? Suppose the current is passing and the anode is acting in the polar zone. Then you instantly change to the cathode, which will also act in the polar zone, so that you get anodal opening added to cathodal closure, and, of course, an increased effect. There are many other problems which can be worked out by these same formulæ.

I wish next to refer to pathology to show wherein these reactions are of value. Almost identical results are obtained whether the electrode is applied to the

nerve-trunk or to the muscular tissue. Changes in these formulæ are only obtained when there are changes in the nerve-trunks or in the anterior cornua of the spinal cord. When there is a pathological change, resulting perhaps from traumatism, the nerve becomes degenerated and may be gradually reduced to the condition of a mere fibrous string. Under these circumstances especially we get modifications of these reactions. These changes are also obtained in anterior polio-myelitis, which is characterized by an increase of the connective tissue which presses upon and blots out the cell-elements of the anterior cornua. We do not get changes in these formulæ when there is paralysis due to brain-lesion. In a case of embolism of the middle cerebral artery or of a clot in the ventricle, none of these reactions are obtained,—at least not for a long time, and then only when descending sclerosis affects the anterior cornua. Changes in these formulæ are therefore significant of changes in the anterior cornua, in the nerve-trunks, or in the muscular tissue.

To be brief, these changes may be said to be a diminution in cathodal closure and an increase in anodal closure, so that the anodal closure may excel the cathodal closure in the power of causing contraction. Why the virtual cathode in these pathological changes excels the actual cathode has, as far as I am aware, never been satisfactorily explained. Cathodal opening contraction is also increased. The character of the contraction also changes; instead of the usual quick response the muscle contracts slowly, and with a prolonged effort.

I wish also to say that these changes are not so invariably present that you may expect to find them in all cases of peripheral palsies. I will show you cases to-day which I have brought here not because I can show these changes, but because I can *not* show them. This simply demonstrates the fact that, no matter what the books may say, in many of these cases the changes are slight or wanting. If they are present they have positive value, but their absence is not always of great negative value. Some fibres may escape and carry the impulse. There may also be a degree of improvement which will obscure the reactions of degeneration which had been found on a previous occasion. While we cannot always explain this satisfactorily, we still have the fact that the reactions of degeneration are not so constant as some would have us believe.

I wish to also state that the first signs of degeneration are not only the qualitative signs of increase of the anodal closure over the cathodal closure, and after a time even cathodal opening contraction, but also the *quantitative* changes. This means that the whole excitability of the nerve to galvanism is at first increased. It is not, as would naturally be supposed, decreased, but increased. After the increased excitability has diminished and is passing on to decreased excitability, the qualitative changes appear. This may be the reason that we cannot always elicit the qualitative changes. The nerve may have been injured only sufficiently to produce the quantitative changes, and under curative measures or the remedial force of nature it has recovered before the degeneration has gone sufficiently far to produce qualitative changes.

I shall now ask your attention to some of the cases which I have here. This first case is one of lead-palsy. I do not intend to enter into any speculations as to the nature of lead-palsy. It is sufficient to know that lead-poisoning usually causes paralysis of the extensor muscles of the forearm. This man is improving, and the reactions of degeneration are not as marked as they previously were. In order to excite the extensor muscle of the forearm we must, of course, apply the electrode over the trunk of the musculo-spiral nerve, which will be found midway between the bend of the elbow and the insertion of the deltoid muscle. This is called the *active* electrode. The other, or *indifferent* electrode, we place at a distance on patient's body,—usually on back of neck or over the sternum. If this man exhibits any of the reactions of degeneration, we should expect that the anodal closure would be as strong as, or stronger than, the cathodal closure. I first make cathodal closure, and a very slight reaction is obtained. I next try anodal closure. The contraction produced is at least equal to that produced by cathodal closure. It should be decidedly less in health. I next try the effect of anodal opening. In order to practise this it is well to allow the current to pass through the nerve for a short time, in order to get the trunk into a condition

of anelectrotonus, or a condition of depressed excitability. Making anodal opening, I obtain no contraction. Applying the electrode to the radial nerve, we find that the contraction from anodal closure is decidedly stronger than that from cathodal closure. This man has passed beyond the time in which there is a quantitative increase in the excitability, and it takes a strong current to affect him. The current which I have used was forty cells of the modified Leclanché battery.

In applying electricity in this way, you should always begin with the mildest possible current which will produce response from cathodal closure. This is to be tried first. Eight or ten cells are usually sufficient for this, and then the current is to be increased by the addition of two cells at a time until anodal opening or anodal closure contraction is elicited.

This second case is a very rare one. It is apparently a case of lead-poisoning in which the lead has not sought its usual area of devastation, but has first affected the deltoid muscles, and is now involving the muscles of the thigh. This is a recent case, and has hardly progressed far enough to give the reactions of degeneration. There is a slight reaction to cathodal closure. Anodal closure seems to be as strong as, and possibly a little stronger than, cathodal closure contraction.

The next case is one of unilateral wrist-drop. When we find this we may be almost sure that the man has been sleeping with his head on his arm; but a man rarely or never sleeps long enough on his arm to produce wrist-paralysis, unless he has been indulging in ardent spirits. This wrist-drop is due to pressure on the musculo-spiral or radial nerve. In this case there have been no qualitative signs, and this is a good indication. There are, however, quantitative signs. The anodal closure contraction is much less than the cathodal closure contraction. I shall next try to obtain an anodal opening contraction. I have tried this in many cases, and have come to the conclusion that anodal opening contraction is by no means as prominent as the books state. There is slight reaction, but that cannot be called a change in quality. I next try these reactions on the well arm, and we find that they are much *less* marked on the sound than on the affected side; hence there is a decided quantitative change.

This is another case of unilateral paralysis due to the same cause as was the previous case. In this case, however, the median nerve was pressed upon, leading to paralysis of the flexor muscles. This is also a recent case. I apply the electrode at the bend of the elbow over the median nerve. There is, as you see, some degeneration reaction.

The last case which I show you is one of peripheral palsy, the nature of which is somewhat obscure. It is supposed to be a case of anterior polio-myelitis. It came on after some severe exertion in the use of the arms. The muscles of the ulnar distribution are the ones affected. This case has given some few reactions of degeneration. With twenty-two cells we obtain cathodal closure contraction which is more marked than anodal closure contraction, but, as I have said, at one observation we often obtain different results than at a former trial. On a former occasion the muscles of the ulnar distribution gave an increase of anodal closure over cathodal closure contraction.

I may say, in conclusion, that the best interrupter to use for these investigations is one attached to the handle of the active electrode, and under control of one finger.

ORIGINAL COMMUNICATIONS.

THE WESTERN HEALTH-SECTION.

BY W. THORNTON PARKER, M.D.
(MUNICH).

A RECENT article of mine in the *Archives of Medicine*, concerning the climate of New Mexico,* has brought me several letters from Western physicians, somewhat severely criticising my opinions concerning that country. A few physicians, especially one in Denver, have kindly sustained my views, and appreciated the difficulties attending any medical man who tries to explain the conditions obtaining at a famous health-resort.

Two articles have appeared within the year in the *Medical Times*,—"The Southwest as a Health-Resort," by Dr. H. C. Wood,† and "The Northwest as a Health-Resort," by Dr. J. J. Leeser,‡—and Dr. S. A. Fisk has contributed a communica-

* Concerning the Climate of New Mexico. Archives of Medicine, October, 1884.
† Philadelphia Medical Times, October 6, 1883.
‡ Ibid., January 26, 1884.

tion on "The Climate of Colorado" in the *New York Medical Record*.* These three articles go very far to prove that the day has passed by for medical men to commend for pulmonary diseases a "humid mild climate." Such a climate cannot *cure*, even if it be able to mitigate, the miseries of pulmonary diseases.

Looking at the map of the West, we find a section of country bounded on the south by lat. 30° N., on the west by the Rocky Mountains, on the east by long. 100° W., and running northward as far as civilization extends. In this section we have the *best* opportunities, to my thinking, for the *cure* of what is popularly known as consumption, to be found perhaps in the whole world; and here, if anywhere, will be found *the atmosphere* which is most desirable.

Considering the evidence offered us in recent medical literature, not excepting the teachings of Prof. Loomis and others in standard medical works,† we must admit that, in general, *dryness*, either cold or mild, is the most desirable condition sought for, other things being equal, in the treatment of pulmonary diseases. Elevation is not so desirable as dryness, and I believe, with others, that it may destroy the good results obtained or obtainable by living in a dry climate. Equability is too often confounded with mildness, and is hard to find. In the northern climates we have a steady winter, and, where out-of-door life can be enjoyed, this is a valuable aid in the "cure."

A great mistake is often made in mapping out sections as *desirable*. In drawing the lines of the imaginary section just described, I have said that *in* this section we have the *best* opportunities for the cure of consumption; but I do not claim that *every* square mile of this health-giving tract might contain a sanitarium, by any means. Journeying about the Rockies, the climate will be found very changeable, presenting every kind of exposure and protection, with even some sections quite moist and malarious, others dry and yet poisoned by unhealthy air. Besides all this, opportunities for the most ordinary comforts, and even safety, of life, are lacking in many districts, while they abound in others. But, taking this division in general, we can confide pulmonary patients there with considerable hope, provided they have the means and the courageous will to get well.

Dr. Wood claims that "where warmth and dryness are associated, the conditions are most favorable." Dr. Leeser stoutly maintains, on the other hand, that where clear cold weather and dryness are associated, the conditions are most favorable. Here, then, we can see the end of doubts. Depend upon it, we are nearing a solution of the problem, even if it be the old story repeated of the shield of two colors.

I have said that the overwhelming evidence, as well as practical experience, teaches that *dryness* is the main chance for cure. Leaving New Mexico in the middle of October and coming swiftly East, although in the midst of an unusually *dry* season, I found the change tremendous, and when at last I reached this "city by the sea," as it has been poetically (?) termed, nature rebelled, and a sharp illness followed. In the experience just detailed it is seen how great is the risk in coming down from 6700 feet above (the altitude of Fort Union, New Mexico) to the sea-level; but often we can ascend from an altitude of say 6000 feet to 8500, yet suffer from humidity! During the month of September I was ordered from Fort Union, New Mexico (6700 feet), to Fort Lewis, Colorado (8500 feet), *but on the Pacific slope*. I felt the change from a dry mild climate to a moist chilly climate very severely, and a winter in such a climate would have been a very undesirable experience. A severe attack of broncho-pneumonia in May had left my lungs in a very sensitive condition, and I was slowly regaining health when this exposure to the climate of the Pacific slope seriously threatened sickness, and a longer residence would have undoubtedly proved seriously injurious, to say the least.

The section of country west of the Rockies, comprising what is known as the "Pacific slope," is in my opinion very undesirable. Colorado between Pueblo and Denver, and some places north, contain the most desirable health-resorts at present within reach, and it would be hard to rival the glorious scenery and life-giving atmosphere of Colorado Springs and Manitou. Penetrating southward of Pueblo, I can speak highly of Trinidad, Colorado, and within a few years, if the better class of citizens is permitted to carry out its plans

* New York Medical Record, November 8, 1884.
† Vide Loomis's Practical Medicine, page 206.

for reforming and improving the town, a delightful and accessible health-resort will there be found.

Moving still farther southward, we pass through a beautiful section of country, now devoted to cattle-raising. As we look out of the cars in the early morning, it seems as if we had entered some wonder-land, slumbering, as it were, in all its native beauty, before the arrival of the thousands who would gladly possess it, if the curse of land-grants and dishonest "rings" could be removed.

Continuing on our way, Las Vegas is reached, and, save for a visit to the "Springs," can be left behind. The Springs are beautifully situated, and when the hotel is finished they will be quite a resort, no doubt, but always inferior to Manitou unless great changes occur in this Territory. In New Mexico, three points besides the Springs can be recommended to invalids desiring moderate elevation, dryness, and equability: they are Santa Fé, Albuquerque, and Silver City, and in their desirability as residences for invalids I think they stand in the order named.

Since writing my former article on the climate of New Mexico, I have been inclined to bring to the notice of the profession the many advantages possessed by Albuquerque. It is undoubtedly true that much that is bad and undesirable, and even violent, exists in that "city of the hard name;" but it is improving steadily. A good class of citizens is already on the ground, and positively excellent society is already to be found, with good schools, churches, stores, etc., and also well-built houses at fair rental. It is somewhat warmer than Santa Fé, and, though not so interesting, is quite as healthy. For those who desire "everlasting summer," as the climate of southern New Mexico has been called, Silver City—bright and shining as its name would imply—offers health and a fair prospect of *wealth* with patient effort.

The climate of New Mexico is "mild and dry," but its elevation, if acceptable and agreeable, must be taken for life. Change from New Mexico eastward to the Atlantic or westward to the Pacific is not advisable, and in the case of the invalid is dangerous. The longer the stay the *greater* the risk. The climate, after one is accustomed to it, slowly but surely winds its confining coils around one, and if experienced for any length of time cannot recklessly be exchanged for a lower and moister level. The effect on the system seems to be a gradual thinning of the blood and general enervation, amounting in some cases to feelings of general debility, indolence, and languor. It seems very risky for patients afflicted with heart-troubles to be sent to an elevation of over four thousand feet above sea-level, if even that much can with safety be endured. It is the climate, to a certain extent, which accounts for the sleepy, worthless feeling which so many complain of.

Great caution is necessary with regard to food. Coffee and arterial stimulants generally must be diminished, and meats should be used sparingly, vegetables, bread, and milk being used more as substitutes. Amongst the population coarse bread, corn-meal, eggs, chicken, and much "red pepper" are used for food, and a short residence in the country explains it all. The torments of the land are the frequent dust-storms, which dishearten and fairly sicken one. These occur principally in the winter and spring. During the prevalence of these storms one must stay in the house, and even then the dust covers everything and makes life, at best, "horrid." Meat and vegetables are poor and comparatively expensive. The pleasant side of the picture is the *constant bright sunshine* and clear skies, and glorious mornings and evenings. Many nights I have spent sleeping on the ground, the clear skies, star-filled, for canopy, and the delicious atmosphere refreshing and invigorating the body. Little dew falls, and one wakes in the morning after such a rest, refreshed and cheered. In what a strong contrast is life within "adobe" houses! The air is so light that windows must be left open, even at the risk of draughts, and unless particular to have a plentiful supply of air—which is not always possible—one awakens fatigued and weary. The rainy season is in the summer, but this is not objectionable. The showers come in the afternoon, refreshing all nature, and they are soon over, and do not keep one in-doors very long. The nights are cool, and there is little if any annoyance from mosquitoes. The study of New Mexican climate, to a visitor, is simply bewildering. A series of maddening contradictions are discovered, in which there is much to admire and much to deplore.

Since my return I notice a tendency for blessings to brighten as they take their

flight; but, in view of the fact that Colorado, Wyoming, Dakota, and Montana are improving in their accommodations for invalids each day, and offering, in my opinion, more certain and more pleasant sanitariums than New Mexico ever can hope to do, I should prefer (all things considered) to recommend patients North rather than South. It depends very much upon who is to be sent. For a nervous, feeble invalid, Santa Fé or Albuquerque might be better, but for a young man of good spirits, with some hope still left, I should urge Colorado or Montana.

In the rush West we are liable to lose sight of many healthy places in Iowa, Minnesota, Nebraska, and Western Kansas. In the admirable paper of Dr. Wood no mention is made of the "Pan-handle" of Texas,—that section of country between New Mexico and the Indian Territory. The climate there is well described by Dr. Wood, and its excellent condition may be known to Dr. Loomis when he speaks of "the extraordinarily dry belt of country which runs northward from San Antonio, Texas,"—the "home of the cowboy," as the tract is called running northward to Kansas through the "Pan-handle." Towns are scarce, but not so wild and disagreeable as one would imagine. After leaving the railroad at Dodge City it is a ride of two hundred miles to Mobeetie, the first town of the Pan-handle.

I do not think that the plan of "roughing it" is a practical one for invalids, or to those inexperienced in camping out, and there is too much danger and hardship to make many men desire it very much; although I certainly do believe that to get well camping is the very best way in which to live for health's sake. Nothing is better in summer than the canvas house well built and well arranged, and equipped with that indispensable adjunct,—the most important member of the party,—a really good cook. Plenty of nutritious food must follow the abundant exercise and exposure to the fresh air, and a small allowance of books is quite necessary for mental food. And here comes in the question of tobacco. To those who love the delicious plant it will be a comfort to turn to the appreciative yet temperate comment upon the "weed" contained in the "United States Dispensatory:" "Moderately taken, it quiets restlessness, calms mental and corporeal inquietude, and produces a state of general languor or repose which has great charms for those habituated to the impression. . . . It must have properties peculiarly adapted to the propensities of our nature to have thus surmounted the first repugnance to its odor and taste and to have become the passion of so many millions." Is not this authority great and good enough to stop us from taking the pipe and the delicious "Durham," or any other tobacco, from our patients? Undoubtedly its loss is depressing to the mind and adds discouragement, in that the lover of the pipe, deprived of his solace, is forced to believe that he must be either very sick to be ordered to do without it, or else that he must be feeble if a return to it would be dangerous. I have met many who have had their tobacco-supply ordered stopped by their medical advisers, but found no evil results following a return to the fragrant pipe; on the contrary, sometimes a commencing habit of constipation was thereby arrested. The importance of this reference to tobacco-smoking cannot fail to be recognized, and the digression will be pardoned by those of my readers who are old smokers.

The weight of a folding cot is not much addition to the luggage, but its comfort in camp is worth a great deal. Some scorn the cot as being incompatible with true camping, but, when we consider perils by rattlesnakes and the deadly Western skunk, those who take Dr. Wood's prescription of roughing it will do well to have with them, and for use, a comfortable, strong, folding cot.

In conclusion, I think that we should not forget to properly estimate the importance of increased altitude as a possible source of disease, and guard our patients accordingly. I believe that the altitude and the dust-storms, the cheerless, damp adobe houses, and the poor food and the depressing social (or unsocial) life, are strong arguments against sending patients, and particularly very sick patients, south of Trinidad, Colorado. The country as a sanitarium has been overestimated; and yet there is much, in spite of all I have said against the climate, to encourage one to hope for some relief in cases of early phthisis, if not a positive cure, provided that the sick one has the double protection of a full purse and a careful attendant. It is no place for a *poor* invalid: even the

rich will find it expensive enough. There is little to suggest exercise in New Mexico. A listlessness overhangs all life, and one longs to see something besides the mud and mud walls, the dust-storm, and the sky. The mountains and the sunshine help, but do not entirely atone for all we have left behind us. The trip for all is a lottery; for some are prizes of gold, for others health, and these prizes may bring happiness, although they must be enjoyed where they are found; but for many, very many, is a hastened death, or such loneliness that death itself may be regarded as a relief.

The question is asked, "Is not the climate of New Mexico better than we can find in most of the States east of the Mississippi River?" I do not hesitate to declare that it is. However, let the physician beware how he hurries his patient away from home-comforts and friends; let him carefully study different sections of country, so as to know and understand them, and to be able to tell his patient what he can reasonably expect when he reaches a given place. Personal experience, after all, is better than studying the roseate-hued pen-pictures of health-resorts and railroad books of travel. Physicians should investigate for themselves, in order that invalids may be wisely directed. To study climatology without travelling is like studying anatomy without dissecting, and he who recommends resorts which he has not seen and examined may be the means of making much unhappiness.

Atlantic City, N.J., December 30, 1884.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
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SYPHILIS OF THE EAR.

DR. JÉGU (*Annales des Maladies de l'Oreille*, etc., Mai, 1884), in a graduating thesis, treats of syphilis of the ear under two grand divisions of acquired and hereditary disease. His conclusions respecting acquired syphilis of the ear are, first, concerning the external ear,—viz.:

1. A syphilitic chancre is found in the external ear only as a very rare exception.

2. Secondary manifestations are of greater or less interest according to their situation upon the auricle or in the auditory canal. Syphilides of the auricle are not specially distinguished from other specific eruptions elsewhere upon the cutaneous surfaces. Syphilides in the auditory canal are not frequent. Chronic aural diseases and uncleanness predispose towards their occurrence at this point. Papulo-ulcerative syphilides are accompanied by symptoms of otitis externa,—viz., a sero-purulent discharge, pain, and more or less swelling of neighboring parts. They tend to hypertrophy. Having become hypertrophied, they offer a marked tendency to abundant suppuration, efface the calibre of the canal more or less, and produce violent otalgia and various disturbances of hearing,—viz., tinnitus and deafness of all degrees. They resemble in appearance aural polypi. Such syphilides last, on an average, four or five weeks, and are healed without trace, by simple means,—viz., detersive washes, cauterizations with nitrate of silver, and dry local treatment. Excision does not hasten their cure.

3. Tertiary lesions in the auricle and in the auditory canal are in the form of gumma. Upon the auricle, on account of their development in a non-extensible tissue, syphilitic gummata produce at times singular deformities, which are dependent, however, upon their situation, their volume and number. In the auditory canal, gummy tumors, as observed so far, have been small, circumscribed, and unaccompanied by disturbed hearing. Finally, there are syphilitic exostoses of the auditory canal, following external otitis, generally two in number, one upon the posterior, the other upon the anterior, wall, narrowing the calibre of the canal about one-third (E. Ménière).

Middle Ear.—The guttural orifice of the Eustachian tube may be the seat of a chancre. The initial lesion at this point is accompanied by adenitis of the posterior cervical or of the submaxillary ganglia, and by secondary phenomena, generally intense,—viz., in the bucco-pharyngeal mucous membrane, painful angina, naso-pharyngeal catarrh, ozæna, and deafness. Upon the skin numerous syphilides occur. Syphilitic chancres of the throat can produce, by contiguity, obstruction of the Eustachian tube and hyperæmia of the tympanic cavity. The phenomena which are thus produced demonstrate the mode of action of secondary syphilitic anginas upon the middle ear.

Secondary syphilitic results in the middle ear comprise lesions arising from the contiguity of the parts to the pharyngeal lesions, and results entirely independent of contiguity. The first class, which are the most frequent, offer a train of symptoms varying according to the intensity of the lesions in the pharynx. When limited to the Eustachian tube they present symptoms of obstruction of this canal. Most frequently the cavity of the tympanum is invaded in its turn, with the characteristics of a simple acute otitis media, rarely passing to suppuration. The membrana tympani presents different changes, according to the intensity of the tympanic disorder. These results generally disappear with the cessation of the lesion which has given them origin. Nevertheless, obliteration of the Eustachian tube by cicatrices has been recorded by Gruber. Hence the prognosis relative to improvement of hearing in such cases should be guarded. General treatment must be aided by appropriate local treatment.

Direct syphilitic affections of the tympanic cavity consist in a chronic suppurative otitis media, in the production of which scrofula is held to play a predisposing part in some cases. Furthermore, Gruber and Schwartze admit the occurrence of an otitis media catarrhalis of the dry form, which affects the two ears successively, and is accompanied by changes in the membrana tympani and deafness, and which is not improved by general treatment.

In the tertiary stage disease of the middle ear is consecutive to gummy growths in the naso-pharyngeal region. Following the ulceration resulting from the breaking-down of a gumma, cicatricial obliteration of the mouth of the Eustachian tube has been observed.

Internal Ear and Auditory Nerve.—Syphilitic lesions in the internal ear occur in four ways:

1. Direct lesions.
2. Propagation of lesion from the middle ear.
3. Osseous lesions.
4. Central nervous manifestations reflected upon audition.

1. The affections of the internal ear by direct lesion manifest themselves sometimes in the secondary and sometimes in the tertiary stage. They often coexist with ocular affections. They are characterized by Ménière's symptoms: (1) Rapid diminution of the hearing supervening without noteworthy symptoms in either the external or internal ear, and which is unmodified by mechanical treatment. (2) Enfeeblement or even suppression of the perception of the tuning-fork and of the watch by the bones of the skull. (3) Amelioration and even cure of the deafness by a mixed and energetic treatment.

Clinical facts seem to be corroborated by anatomical research, which shows that the lesions in the labyrinth consist in a periostitis and in a hyperplastic cellular infiltration.

2. Labyrinth diseases by propagation of tympanic lesions present nothing special. There is an association of symptoms of otitis media and of otitis interna.

3. Osseous lesions which make an impression on audition are naso-cranial osteitis, caries of the mastoid apophysis, and especially caries of the petrous portion of the bone.

4. Cerebral syphilis is foreshadowed by various forms of aural or auditory troubles. Sometimes they are at first the only symptoms of the disease. They are generally accompanied by other cerebral symptoms. Sometimes they consist in subjective sensations limited to one ear, or they may be ambilateral. Sometimes they are manifested by a progressive diminution of hearing which may amount to absolute cophosis. They may, in fine, present all the phenomena of Ménière's disease. The prognosis is variable. Recognized from the outset, they are, fortunately, influenced by specific treatment. In some cases the deafness is permanent. Auditory maladies appear in the premonitory symptoms of specific tabes. Sometimes they are tinnitus in various forms, in other cases they manifest all the symptoms of Ménière's disease. They are of limited duration, and disappear more or less completely.

Hereditary Syphilis of the Ear.—Next to dental and ocular diseases, aural maladies constitute the most constant symptom of hereditary syphilis. They arise from contiguity of pharyngeal lesions and from direct lesion. As in acquired syphilis, so in the hereditary form, gummas and naso-pharyngeal ulcerations may communicate themselves to the middle ear and produce a simple otitis media,

which, aside from its mode of development, presents nothing special.

2. Primary manifestations by direct lesion are (*a*) otitis media suppurativa, and (*b*) profound deafness.

Otitis media suppurativa of hereditary syphilis manifests itself chiefly in early childhood. It becomes established without pain or any symptom of an acute process. The absence of pain, without being absolutely characteristic, is a diagnostic sign of some value. The course of the otorrhœa varies, sometimes being healed in a few weeks, and in other instances persisting for several years, and is accompanied by grave lesions of the tympanic cavity and of the membrana tympani, and ends in deafness.

Profound deafness in hereditary syphilis makes its appearance about the age of puberty. It occurs suddenly, without lesions in the middle or external ear, often being consecutive to a parenchymatous keratitis. Its onset may be characterized by vertigo and tinnitus aurium of various qualities. The deafness is on both sides. Sometimes both ears are affected at the same moment, at others successively. The lesion may be in the labyrinth, as shown by Moos, or it may be in the floor of the fourth ventricle in the ambilateral cases, as held by some.

The prognosis is grave. Specific treatment, which is efficient in parenchymatous keratitis, is ineffectual in heredito-syphilitic deafness.

This paper of Dr. Jégu gives a very good sketch of our present knowledge concerning the subject of syphilis of the ear. All otologists agree as to the rarity of syphilis in the external ear.

In a recent number of the *Archives of Otology* (vol. xiii. page 241, December, 1884), Dr. J. Zucker, of Berlin, gives an account of

TWO CASES OF CONDYLOMATA, AND ONE CASE OF PRIMARY SYPHILIS OF THE EXTERNAL EAR.

In this article Dr. Zucker states that Mracek (*Wiener Med. Presse*, No. 1, 1880), in his exhaustive report of over four hundred cases of the primary manifestation of syphilis outside of the genital tract, cites but three cases of primary syphilis of the external ear: one reported by Hulot (*Annales de Dermatologie et de Syphilographie*, 1878), of a child with a chancre on the mastoid process, attributed to infection by the nurse; a second of a chancre at the base of the tragus, of problematical origin; and, finally, a case from his own practice of a chancre on the lower portion of the mastoid, from the kiss of a prostitute. Pellizari (Milan, 1882) has recently examined with great care forty-one cases of the transmission of syphilis without coitus, and found only one in which the primary lesion appeared in the form of a chancroid on the left cheek, and a second one on the lobe of the auricle on the same side in the same individual. The origin of these primary infections, occurring in a father, was attributed to the use of a handkerchief which had been previously employed by his son to wipe his penis.

Finally, Dr. Zucker gives an account of primary syphilitic infection of the external ear, beginning near the tragus, and originating very probably from the kiss of a prostitute. Four weeks after the exposure an excoriation was noted near the tragus, which steadily increased in size and began to suppurate, and eight weeks after the exposure there appeared on the surface of each hand three or four small, round, slightly scaly efflorescences, which facilitated the diagnosis of primary syphilitic infection. Close examination of the ear, nine weeks after the exposure, showed that the anterior wall of the cartilaginous meatus bulged excessively inward and backward, that the tragus was livid red, twice as thick as normal, with its front surface covered by a darkly pigmented, radiating cicatrix. The entire parotid region seemed involved, was greatly swollen, hard as a board, but not at all painful. Beneath the angle of the inferior maxilla a bunch of separable yet indurated and enlarged lymphatic glands were found. The hearing was but slightly diminished, and there was no secretion from the ear. The posterior wall of the cartilaginous and osseous meatus, as well as the membrana tympani, were normal. The naso-pharynx was free from complications, and the genitals were intact.

AURAL SYMPTOMS OCCURRING IN HYSTERIA, AND THE HYSTERICAL ELEMENT IN AURAL DISEASE.

Drs. G. L. Walton and C. J. Blake have called attention to this subject in a recent number of the *Annales des Maladies de l' Oreille et du Larynx*, September, 1884. It is held by these observers that

aural symptoms occurring in hysteria, and, conversely, the hysterical element in aural disease, are subjects which should receive the attention of neurologists and aurists, but which have been somewhat neglected. It is important in some cases to recognize the fact that hysteria is a factor in aural disease, and also to carefully investigate aural symptoms when they occur in cases of hysteria and other nervous affections. "There are unquestionably numerous cases in which the subjective symptoms of an existing aural disease are increased to an extent which gives them undue importance in the mind of the practitioner by the co-existence of functional cerebral disturbance, evidencing itself in the train of symptoms to which collectively we give the name of hysteria."

Of the cases reported by Walton and Blake, the first illustrates the extent to which an aural disease, severe in its objective as well as its subjective symptoms, may be simulated by an hysterical patient; the second the influence which an existing aural disease of comparatively mild type may have in originating marked hysterical symptoms in a case already of hysterical tendency, and, reflexively, of exciting symptoms leading to the apprehension of graver aural disease.

A CASE OF GASTRIC ULCER—RECTAL ALIMENTATION—RECOVERY.

Read before the Philadelphia Clinical Society, December, 1884,

BY JAMES B. WALKER, M.D.,

Professor of the Practice of Medicine, Woman's Medical College; Lecturer on Clinical Medicine, Woman's Hospital.

JOSEPHINE C., aged 33 years, single, weight 98 pounds, presented herself at the Woman's Hospital Medical Clinic, January 13, 1881. She was a domestic, with a father living and well, and a mother dead of consumption. The patient had always been strong and well until the last three years, although the menstrual function, established at the age of 15, and which since then had continued regular and painless, had nevertheless always been extremely slight, never lasting more than a day or two.

Three years before, she had a severe attack of vomiting. The ejecta were very dark, and resembled "coffee-grounds." Once free blood was vomited. The stomach was at that time entirely non-retentive of food.

A year and a half after this attack she had a vomiting seizure, in which, however, no blood was vomited. In this attack she presented herself for treatment at the Woman's Hospital Dispensary, and was referred to my clinic. She was shown to the class as a case of ulcer of the stomach, and treated accordingly, and rapidly convalesced without admission to the hospital wards.

On November 25, 1880, another attack commenced with symptoms of dyspepsia, gradually increasing until intense pain was occasioned by ingesta, until all kinds of food, whether solid or liquid, were vomited. This aggravated condition has existed ever since.

During the long intervals between these three separate seizures the stomach has performed its work normally, no care being necessary in regulating the quality or quantity of the food in order for comfort.

On admission to the wards of the hospital she presented a decided cachexia, which, with her profound emaciation and exhaustion, raised a question as to the presence of malignant disease. The mucous membranes were all very pale, the tongue flabby, pale, glazed, and marked by the teeth along the border, with two stretches of a yellowish-white fur along the sides posteriorly, not reaching the edges or the tip. The stomach was *absolutely* non-retentive, even water in teaspoonful doses inducing vomiting. The bowels were greatly constipated, no movement having occurred for the two weeks previous to admission.

A tender spot has existed at the epigastrium since the commencement in November, and now a somewhat diffuse area of tenderness exists, which, however, does not involve the entire stomach.

The pulse is small, weak, and 88 per minute. Heart-sounds normal, except accentuation of second sound. Urine acid, specific gravity .1018, no albumen.

She was placed in bed, a blister applied to the epigastrium, 30 grains of bismuth subnitrate given every four hours; ¼ grain argenti nitratis at night; 4 ounces beef-tea by rectum every four hours, and a teaspoonful of milk by the mouth every hour. The bowels were at once moved by a copious enema. The first day in the hospital under this treatment the epigastric pain was intense. Vomited several times, but retained the rectal doses of beef-tea. The second day felt easier, but, as she still vomited after the small amount of milk by the mouth, gastric alimentation was suspended entirely. The blister raised but slightly, and was renewed in four days, when, although kept in place for twelve hours, it failed to vesicate.

The following day, third after admission, did not vomit at all, but rejected a small amount of each enema.

The ninth day, had an attack of pain in stomach, but no nausea or vomiting.

The tenth day, complained of rectal tenderness.

On January 29, fifteen days after admission, first complained of feeling hungry.

February 3, was given a teaspoonful each of milk and lime-water, which was repeated every hour, causing some pain, but neither nausea nor vomiting. It was discontinued after a few doses.

February 6, twenty-three days after admission, drank a small amount of milk without pain.

February 7, some beef-tea administered by the mouth, which acting kindly was continued; enemata continued also.

February 8, had pain after the milk, but none after the beef-tea; milk discontinued.

February 9, sat up an hour without much fatigue; nitrate of silver stopped; took three cups of beef-tea during the day.

February 10, took four cups of beef-tea without unpleasant results; enemata discontinued.

February 13, some milk with lime-water allowed, but it was digested with some discomfort; beef-tea caused none.

February 14, bismuth powders discontinued.

February 16, warm baths once daily, followed with olive oil inunctions on account of the harsh dryness of the skin.

February 17, thirty-four days after admission, small amount of solid food allowed once; no discomfort.

February 18, regular meals allowed without discomfort.

February 22, skin becoming moist and soft; felt no discomfort after eating; bowels moved naturally.

February 28, patient improving daily; lips becoming red; epigastric pain and tenderness no longer present.

March 4, forty-nine days after admission, discharged entirely well.

This patient presents several phases of peculiar interest.

1st. The cachexia was quite as marked as in most cases of gastric cancer, and much more so than in many cases of that affection which have fallen under my observation. But the disease was believed to be non-malignant, chiefly on account of the previous attacks which had each terminated in complete recovery, with comparatively long periods of health between them. Was it gastritis, and not ulcer? The rather more diffused tenderness than ordinarily exists in gastric ulcer left no doubt in my mind that there existed an aggravated and irritable condition of the mucous membrane about the area or areas of ulceration, but the still limited tenderness excluded to my mind chronic gastritis. Vomiting of blood had only occurred in the first seizure, three years before; but, as it is absent quite frequently in gastric ulcer, the want of it did not invalidate the diagnosis of the latter disease.

Again, the case is interesting on account of its recurrence. This, however, is the natural history of gastric ulcerations,—not that they must recur, but that they *may*. Certainly the cicatrix left after the first recovery will favor ulceration rather than the healthy mucous membrane in one not so affected.

The case is still further of interest on account of its persistent continuance. About November 25 the first symptoms were noticed. The time was fixed the more easily because this is one of our annually recurring *gastric epochs* from which time is reckoned. This persistence in a disease which naturally tends to recovery is, however, easily explained on considering the patient's habits.

Attempts at cicatrization were combated by the entire absence of any hygienic method to favor it until her admission to the hospital. Indeed, this, together with her great exhaustion, induced us to insist on her coming under the careful management of the hospital, for she was reported as entirely unable to supervise such method or submit to it except under strict discipline; whereas, under this, improvement commenced at once and continued uninterruptedly.

Etiologically, the case is not very instructive, except that the feeble attempt at menstruation suggests the possibility in a young woman of good health as possibly directly inducing the ulceration by the process of vicarious menstruation, with subsequent necrobiosis of the ecchymosed tissue, a condition apparently more frequently concerned in inducing this disease than all others combined.

The case is especially interesting, to my mind, in the long peried of time the patient was exclusively nourished by beef-tea digested and absorbed by the rectum. For twenty-three days the patient lived on these, and not only "held her own," but gained slightly in strength, if not in flesh. In these days of peptonized foods this would be sufficiently striking; but the fashion was not then instituted.

As regards the medicinal treatment, what was given answered the purpose, and under its administration improvement was gradual and persistent.

In cases of gastric ulceration with hemorrhage I am in the habit of using ol. terebinth., gtt. xx every two to four hours, in a little sweetened water.

My attention was first called to the hæmostatic action of this drug in the most nearly fatal case of gastric ulcer I have ever seen, which fell under my observation while still a student. Iron, opium, silver, lead, tannic acid, gallic acid, and some other agents were successively administered, with unvarying failure and simply aggravation of pain, discomfort, and hemorrhage, until the patient was almost exsanguine. Turpentine arrested for the first time the downward tendency, and under its use hemorrhage was at once arrested and recovery prompt and permanent. Since that time I have frequently used it in cases similar, though in none so severe, with invariable success, so that I look upon turpentine as the least irritating and, at the same time, most certain hæmostatic in hæmatemesis, especially when due to gastric ulcer. Its efficiency is too little appreciated by the profession. Nor is its province limited to the arrest of hemorrhage. Equally is it serviceable, apparently, in favoring the process of cicatrization, as advocated by the late Professor George B. Wood, in typhoid ulceration. It was not used in the case under consideration, as the irritable condition of the stomach demanded our utmost respect, and, knowing that the tendency of the disease was to cicatrization, only protective measures were instituted.

The question which arose at the outset of the case, as to whether it was one of malignant disease whose only tendency, despite whatever was done, was to destruction, or, on the other hand, an intensely aggravated case of a disease whose tendency is towards recovery if so permitted, was most satisfactorily decided in favor of the diagnosis of non-malignant disorder by the complete recovery of the case.

I am indebted for the official record of this case, upon which my paper is based, to Dr. Anna E. Broomall, then resident physician of the Woman's Hospital.

COCAINE DISKS.—The most convenient form for the employment of cocaine muriate for ophthalmic practice is in that of gelatin disks. Dr. Joseph Warren, of Boston, who suggests this method, has employed them with much satisfaction. Each disk contained about half a drop of an eight-per-cent. solution (gr. $\frac{1}{25}$). They were made for him by Metcalf & Co., and are recommended on account of their convenience and economy. —*Boston Med. and Surg. Journ.*, January 29.

A NEW METHOD OF STRAPPING THE TESTICLE.

BY WM. BARTON HOPKINS, M.D.,

Surgeon to the Episcopal Hospital and Out-Department of the Pennsylvania Hospital.

STRAPPING swelled testicle in the ordinary way, with adhesive plaster, is effective only so long as the yielding quality of the tissues of the organ is acted upon by the pressure with which the plaster is first applied, there being no elasticity in the muslin. The dressing must be frequently renewed, therefore, in order to follow up the rapidly-subsiding swelling. I have found that india-rubber prepared and applied in the following manner obviates this necessity, requiring renewal not more than once in four or five days, besides making much more persistent pressure than can be obtained by adhesive plaster. The advantages it possesses over the other forms of elastic pressure which have been employed, as the rubber bandage and the compressing-bag, are the perfect uniformity of pressure which can be exerted upon the entire organ, and the readiness with which it may be adapted to any case.

Two adhesive strips three-quarters of an inch in width are first made to encircle the scrotum at the upper portion of the testicle, in order to hold the latter well down in the bottom of the scrotal sac, as in the ordinary method, and to form an unyielding base of support for the elastic pressure to act upon. I originally used rubber for this, but found that the succeeding strips of rubber forced the organ partially through the encircling band thus formed, caused the material to become plicated, and thereby gave rise to pain. The testicle being thus fixed, four bands of rubber are applied after the manner shown in the accompanying illustration. These are made of "bandage-gum" cut into strips of the required length, an inch and a quarter wide, and retained with "rubber cement." A few drops of the cement are rapidly and thinly spread upon a strip with a spatula, and a few drops more upon the adhesive plaster and skin of the scrotum. These surfaces are allowed to nearly dry, care being taken that the rubber meanwhile does not curl up on itself and stick fast. One extremity of the strip is then placed upon the adhesive plaster posteriorly, carried forward beneath the testicle, and fixed in

front. Another is applied in like manner laterally, and two more obliquely, four

being usually sufficient to cover in the organ.

As with india-rubber used elsewhere for a permanent dressing to induce pressure, great caution must be exercised not to constrict the parts too firmly: about four ounces traction on each strip when the dressing is completed being sufficient to aggregate the maximum pressure likely to be required.

2018 Spruce Street, Philadelphia.

NOTES OF HOSPITAL PRACTICE.

HOSPITAL COLLEGE OF MEDICINE, LOUISVILLE, KENTUCKY.

CLINIC OF DUDLEY S. REYNOLDS, M.D.,

Professor of General Pathology and Diseases of the Eye, Ear, and Throat.

Reported by Allen Kelch, M.D.

GENTLEMEN, — Before introducing the patients who are to be the subjects of our study for the next hour, permit me to suggest that the best method of inquiry in most cases that attend a public clinic like this is to ignore all that rubbish commonly called "the clinical history of the case." Believe nothing of a material nature concerning the development of a disease or its progress which is not clearly marked in the phenomena present at the time, or which does not sustain some perceptible relation to the present phenomena. The application of this rule of caution shall be made apparent to you in the course of this clinic.

SYPHILITIC KERATITIS WITH ULCERATION OF THE LARYNX.

Mrs. G., æt. 39, came here three months ago with keratitis punctata, and incrustation along the margins of the lid matting the lashes together and causing the lids to adhere during the night. She had a papillary eruption about the face, chiefly upon the forehead, the nose, the cheeks, and the chin, with a few papules about the neck, and fewer still upon the wrists and arms; the eyes were morbidly sensitive to light; the lids were swollen, and the hot tears flowed freely upon the slightest exposure to light. She claimed to have neuralgia, and mentioned the name of a respectable practitioner here in the city as having attended her for several weeks consecutively for that disease. She says he gave her quinine and morphine for a while, and subsequently arsenic. He blistered her behind the ears. She said she had never been sick a day before in her life, except in confinement. She claimed to be the mother of five healthy living children, the youngest of whom is now eight months old. She says her husband's health is excellent.

On her first appearance here, a muffled and peculiar tone of voice was noticed whilst she related this history I have just repeated. She said the breaking-out she had was heat and mosquito-bites. As some of you may remember, I had her statements recorded for the very purpose stated in the beginning of my lecture to-day.

Examination of her throat at that time revealed extensive phagædenic ulceration, beginning at the base of the epiglottis and extending down in front of the anterior attachment of the left vocal cord.

She was ordered a half-ounce of bicarbonate of soda to be dissolved in six ounces of water as a lotion for the eyes, for the purpose simply of dissolving and clearing away the accumulated matter in the lashes; an ointment composed of one scruple of boric acid and a half-ounce of petrolatum was directed to be applied to the lids morning and night. She was directed to take of iodide of potassium one ounce, two ounces each of camphor-water

and simple syrup, a teaspoonful in a glassful of water every four hours.

She made rapid improvement; in a week the ulceration of the larynx had almost entirely healed; the eyes were now less sensitive to light; the lids were no longer swollen, and their margins were clean. The strength of the medicine was then increased by the addition of ten grains of the iodide to each dose. In a week more her voice was quite natural; she had improved in flesh, and she said she had suffered no pain at all after the first dose, and she was able to come to the clinic alone. There are now no appearances of disease beyond a few very minute and dimly-marked opaque spots in the cornea.

I sent for this woman to come to-day that we might institute this comparison between the facts in the course of her disease and the history she gave. It is clearly apparent to my mind, both from the nature of the corneal disease and the ulceration of the larynx, laying aside the equally almost certain evidence afforded by the eruption upon the face, that this woman was suffering from constitutional syphilis. The result of the treatment has fully confirmed the diagnosis. Now, as to the peculiar characteristic appearances in the cornea and in the larynx. First, any distinctly and clearly marked effusion of plastic matter into the proper substance of the cornea, involving both eyes and occupying different circumscribed positions in the cornea, is almost certainly syphilitic. It is as clearly characteristic as the sore with everted margins and gray base commonly called the hard chancre, the true chancre, or the Hunterian chancre. Likewise the ulceration in the larynx, sharply defined with ragged and everted margins, surrounded by inflammatory effusion, presents all the characteristic appearances of syphilitic ulceration. This papular eruption upon the skin is not so positively indicative of syphilis. It is likely a practitioner inexperienced in dermatology might confound it with some other form of papular disease.

The history given by Mrs. G. might have been, according to her judgment, entirely truthful. She is not a woman, as you observed when she was present, of sufficient intelligence to be able to give such a well-marked history of periodical neuralgia and to paint so good a picture of what is in this section of country called chronic malaria.

If this were an uncommon sort of case I would not devote so much time perhaps to pointing out the discrepancies between the phenomena present and the so-called clinical history, but it too often happens that the general practitioner of medicine does not exhibit sufficient curiosity to induce him to look into the larynx and nasal passages, or to concentrate the light with an ordinary converging lens in such a manner as to illuminate the cornea. Some very excellent practitioners—men well informed in the literature of the profession—exhibit this carelessness, which is, in cases like Mrs. G., little less than criminal.

As she enjoys good vision (sufficient for all her requirements) and suffers now with no pain or other evidences of disease, she may go, with the injunction to take forty grains of iodide of potassium in a tumblerful of water every night for the next two months.

OTITIS MEDIA PURULENTA

J. H., 18 years of age, an intelligent young man, a tobacco-stripper. For several years he has had a progressive impairment of hearing. Two weeks ago to-day it was extremely difficult, as you may remember, for me to make him hear my voice; the external auditory canals were both filled with muco-pus containing a quantity of dirt from the tobacco-factory. This was mopped out with small portions of cotton-wool rolled upon the end of a probe; the Eustachian catheter was then employed, and air blown through the middle ear, bringing away a considerable quantity of muco-pus. A solution of chloride of sodium (3–3) was then employed, about one minim being placed in the distal end of the catheter, and, the nozzle of the Politzer air-bag being placed over the tip, forcible compression was made, driving the minim of solution through the walls of the catheter in such a way as to permit the escape of it in the form of spray into the Eustachian tube, and by continued blowing the dissolved inflammatory matters were easily blown out through the perforated drum-membrane. Following this a single drop of Lambert's listerine was blown through the catheter in the manner just described. This practice has been kept up once a day since, through

the kind attention of my assistant. Now Mr. H. is able to hear my watch at two inches from the right ear and three inches from the left. He experiences no difficulty in hearing all conversational tones.

Another difficulty from which he suffered, and which created considerable amusement here at our last clinic, deserves attention now. You have doubtless noted the absence of the very offensive odor which attended his presence in the arena at his last call here. You may remember he told us the source of the odor was his feet, and that a member of the class, and two or three outside practitioners, had for weeks been taxing their skill in the use of various kinds of lotions to overcome it. I dare say you will recall to mind the advice I gave him on that occasion,—to go home and buy a flesh-brush and a bar of good soap, and to take a bath every morning before breakfast and put on a clean pair of socks daily.

[Amidst great laughter the young man announced that the soap and water had done more good than all the medicines, and if he had only known that before he could have saved a good deal of money which he had spent at the drug-store.—REP.]

The affliction called stinking feet is singularly limited to people of constipated habit and whose feet are strangers to soap and water and clean socks.

ANTERIOR SYNECHIA FOLLOWING PERFORATION—USE OF COCAINE.

Annie F. was brought here by a member of the class a month ago with the left eye closed: she was anæmic and emaciated. She had just recovered from the measles, and the gentleman who brought her to the clinic said that the measles had "settled in her eye." Examination showed a perforating ulcer of the cornea about midway between the inner and the inferior margin of the cornea. The iris was at that time bulging through the opening, and the child was in great pain. A solution of the sulphate of eserine, one grain to the ounce of water, was directed to be instilled three times a day, and the eye to be closed with dry absorbent cotton secured in position by a strip of adhesive plaster extending from the cheek to the forehead. The other eye was directed to be protected from the glaring light by what are called in London "smoked eye-protectors." The smoked eye-protector is known in this country as the "London smoked coquille," or shell-shaped glasses.

She was ordered ten minims of the syrup of the iodide of iron after each meal, and, with some dietary regulations, made rapid improvement. The ulcer soon healed by granulation and cicatrization, the iris, however, remaining attached. It is desired to have her return to school, but on the slightest attempt to read the eyes fill with tears. This reflex irritation of the eyes, shown by a sense of discomfort and a sudden flow of tears on attempting to read, is no doubt chiefly due to the fact that the pupil of the left eye has been almost entirely obliterated, by the falling of the iris into the lips of the corneal opening at the time of the perforation of the cornea by the ulcer. When no particular strain or effort is required to see near objects, no irritation is developed; as soon, however, as the patient is able to see a little with the left eye, the accommodative effort to harmonize and at the same time to fix the two eyes upon an object calls forth the phenomena described. I have here a small iris-knife strikingly similar to that of Dr. Hays, but curved upon the flat. Passing this knife through the cornea, and taking great care not to permit the aqueous humor to escape, I am able, as you see, to carry it across the anterior chamber above the pupillary opening and obliquely downward toward the nasal side. I am now able to get the point of my knife below the point of attachment of the iris to the cornea, and by this very delicate and carefully conducted sawing motion you observe now that the iris is cut loose and has fallen away from its position in contact with it, and the pupil at the same time is much enlarged. No hemorrhage has occurred, which I attribute in part to the hæmostatic powers of the cocaine (a solution of which was instilled five minutes before the operation was begun). The patient remains unconscious of the nature of the proceeding, and it evidently produces no pain. On the withdrawal of the knife a slight oozing of aqueous takes place. It is difficult to account for this, and it has been remarked by other operators, some of whom have not hesitated to attribute it to the effects of the cocaine upon the connective-tissue fibre of the cornea, which causes the opening a moment ago occupied by the knife to close speedily upon its with-

drawal. I myself believe that, while the cocaine may have this effect, in this instance it operates in another manner not before mentioned,—viz., it reduces the tension of the eyeball. This effect of the drug opens up a new field for its application in the treatment of the painful tension so often present in phlyctenular keratitis, and greatly diminishes the danger of iridectomy for the relief of glaucoma, as I shall now show you.

GLAUCOMA—IRIDECTOMY UNDER COCAINE.

Mr. A., 52 years of age, is now blind in the right eye, the pupil of which is widely dilated, the eyeball tense and painful to the touch. This obeys the law of periodicity in this: that two months ago it became painful and tense, the patient had flashes of light, with an unnatural halo around artificial flames of light, and on going into the street he was astonished at seeing only part of an object at a time. The pain continued for forty-eight hours, and then subsided, leaving the eye somewhat tender to the touch and with impaired vision, the halo remaining around the gas-jet or the lamp-flame. In about ten days the same phenomena returned, accompanied by a violent sick headache lasting about forty-eight hours and leaving the patient in a state of great nervous prostration. At intervals regularly of about ten days these phenomena recurred, until two weeks ago sight was extinguished in the right eye. Four days ago the phenomena reappeared in both eyes, creating so much alarm in the mind of the patient that he at once left his home and came to this city to find relief.

I saw him for the first time this morning. He was then suffering morbid sensibility to light and some nervous headache. He had tension +2 in the right eye, and tension +1 in the left. I instilled into each eye one drop of a solution of hydrochlorate of cocaine (gr. ij–ʒj.) In five minutes he opened his eyes and faced the window without discomfort. In seven minutes the tension of each eye was perceptibly reduced. In eight minutes I made an ophthalmoscopic examination, discovering what has long been recognized as one of the objective signs of glaucoma, the sharply-cupped disk in the left eye, the beaded appearance of the retinal veins in the right, the disk being deeply cupped in both. This cupping of the disk is, in fact, a well-marked depression of the optic nerve.

Strangely enough, the examination provoked no reflex irritation; in fact, it gave the patient no pain whatever.

I shall now proceed to instil one drop of the cocaine solution into each eye, to prepare him for the removal of a portion of the iris.

[Reporter's Note.—3.40 P.M., instillation made. 3.45, patient declared insensibility of the eye and mounted the operating-table. 3.47, speculum introduced between the lids of the right eye, and the operator introduced Jaeger's keratome just within the margin of the sclera, passing it on into the anterior chamber, withdrawing it cautiously, allowing the aqueous humor to flow out slowly. The iris appearing between the lips of the wound was seized with toothed forceps, drawn out, and the protruding portion snipped off with scissors. This was followed by no hemorrhage, and after rubbing the angles of the wound with the index-finger to prevent the incarceration of portions of the iris, a drop of a solution of eserine (one grain to the ounce of water) was instilled, and the speculum withdrawn. 3.52, the patient's left eye, being still anæsthetic, was subjected to a precisely similar proceeding. 3.55, iridectomy had been completed in both eyes without any pain whatever and without hemorrhage.]

Gentlemen, you observe how quietly this man submits to the operation of cutting into the eyeball, drawing out and snipping off with the scissors a portion of the iris, and, what may appear to be the ordinary occurrence to an inexperienced observer, no hemorrhage followed. I can scarcely remember the time when I have done iridectomy for the relief of glaucoma without some hemorrhage. Indeed, it is one of the great sources of danger in the operation, but, as you have now observed, this operation was entirely painless as well as free from hemorrhage; no nausea, retching, or vomiting, no sudden flow of blood to the head and face, and consequently the vessels subjected to no unusual tension, which removes all the sources of danger to the eye from the operation. These disagreeable phenomena almost uniformly attend the operation under chloroform or ether, and the proceeding is so painful upon the morbidly sensitive eyes

of the glaucomatous subject that it is generally practised with their aid. The cocaine is unquestionably the greatest discovery of modern times, far exceeding chloroform in its applications to ophthalmic and aural surgery. It may be well to note that the hydrochlorate of cocaine made in this country by McKesson & Robbins, of New York, is that which I am now using. It is in every respect equal to that made by Merck, of Darmstadt.

IMPACTED ACCUMULATIONS OF LONG STANDING IN BOTH EARS.

Mr. S., 49 years of age, suffers impairment of hearing which he thinks is hereditary. He is desirous, however, of having something done to arrest, if possible, the further progress of the disease. He hears my watch upon pressure against the tragus; he hears it equally well when it is brought into contact with the mastoid process. On lying down at night he has for years been disturbed by hissing sounds. He has never done anything by way of treatment, because his father and his mother were both hard of hearing, he has several brothers afflicted in the same way, and he feels confident the disease is hereditary.

Examination shows an accumulation of something almost exactly the color of the membrane lining the auditory canal, which is entirely filled. With a blunt hook about the size of a No. 2 Bowman's lachrymal probe it is easy to detach the margin of the foreign substance occupying the external ear. By careful coaxing with this blunt hook the whole mass is moved from its position, when the patient is instantly seized with a tickling in the throat and cannot restrain the disposition to cough. Coaxing, as you see, still further now brings this enormous mass, which is something more than a quarter of an inch in diameter, somewhat cylindrical in form, and just about three-fourths of an inch long. As you observe, it is covered with a whitish film, which is evidently a cast from the lining of the external auditory canal, including the outer surface of the drum-membrane. Inspection now shows that the walls of the external auditory canal in contact with this foreign mass are quite thin, suffused with blood, and look ready to bleed. Mopping the passage with a solution of carbolic acid (ʒss to the ʒ of distilled water) by means of a piece of cotton rolled on a probe and dipped in the solution causes a slight sense of pain and smarting, which is, however, but momentary in duration. Holding the nose, the patient is now able by forcibly blowing to distend the cavity of the tympanum and cause the drum-membrane, which was before depressed, to assume its normal position, when the patient exclaims that he "feels an awakening into a new world." He is at once able to hear the watch at ten inches which but a few moments ago required to be pressed against the ear.

Inspection shows the other ear to be in precisely the same condition. The same process of manipulation as that employed in the other ear brings forth a similar mass of foreign matter. This seems to be compounded of an outer tough, amber-colored substance, like that which constitutes the crust upon the surface of an eczema, the whole enclosed by a film of epidermis. There is no telling how long this formation has been in the ear. The patient does not remember when his hearing was as acute as it is now since the removal of this foreign matter. He is ordered to have one grain of resublimated iodine, five minims of pure carbolic acid, and half an ounce each of glycerin and distilled water, with enough iodide of potassium to make a good solution, to be dropped into the ear every morning and evening,—the carbolic acid to allay irritation, and the iodine to stimulate the circulation and glandular functions of the membrane. The method of inflating the middle ear by holding the nose, closing the mouth, and forcibly blowing is known as Valsalva's method, although every boy in the world who ever went swimming has practised it to expel the water from his ears.

This patient may go with the assurance that such accumulations in the ear are in no way hereditary; and should any further trouble appear, we hope to be able to afford as prompt relief again as we have done to-day.

TRANSLATIONS.

PRIMARY SCLEROSIS OF THE COLUMNS OF GOLL.—In *Le Progrès Médical* (No. 49) an interesting case of typical progressive sclerosis of the spinal cord, occurring in a man, 48 years of age, is reported by M. L. Camuset. With enfeeblement (ideas of

grandeur) of the mental faculties, he had some paresis of the lower extremities, supposed originally to have been produced by cold. His pupils contracted and expanded normally; his sight was good. Walking was difficult and slow, but he had no lancinating pains and no gastric crises. The difficulty in standing upright was not increased upon shutting his eyes. The patient's malady remained stationary for a year, and then without known cause he became very much excited, and finally developed acute mania ten days before death.

At the autopsy the spinal cord appeared healthy to the eye, but under the microscope a manifest sclerosis was localized at the innermost part of the posterior pyramids. In the cervical region, where the column of Goll is very limited, it was seen that the sclerosis had invaded the entire column in its transverse section. This was also noticed in the dorsal and lumbar regions, though in the latter the lesion was much less regularly distributed. The lesion was more marked posteriorly, and progressively diminished towards the front. The brain appeared normal; there were some evidences of chronic meningitis, but none of the lesions of general paralysis.

The following reflections were offered upon this case by the author. He passed without discussion the interesting question of the association of medullary sclerosis with mental alienation, which was made more interesting by the absence of the usual cerebral lesions of general paralysis. He regretted that the sensory and motor phenomena had not been studied more minutely during life. However, observation showed that a sclerotic phlegmasia produced by, or at least immediately following, a chill had been localized in the columns of Goll, and showed a tendency to extend, so that the root faisceaux would certainly have been attacked in their turn. In this case the patient, had he lived longer, would have shown the symptoms of ordinary locomotor ataxia, which symptoms were wanting because they did not have the time to develop. The columns of Goll are made up by the commissural fibres, and their lesion does not produce visual troubles, ataxy in walking, or fulgurant pains. It was found, moreover, that the patient could stand with his eyes shut without being any more unstable than when his eyes were open.

Acid Remedies and their Relation to Dyspepsia.—Professor Riegel, in the *Archiv für Klinische Medicin*, December, 1884, contributes a very long article on the Pathology and Diagnosis of Diseases of the Stomach. He concludes that a small mixture of organic acid produces no injurious influence upon digestion, but that a greater quantity of this organic acid, as well as muriatic acid, will in a high degree impair digestion. On this account the disadvantageous influences of sour fermentation in many forms of dyspepsia may be attributed to the presence of too rich a mixture of acid, especially lactic and butyric acids. The favorable operation of an alkaline remedy in a case of the abnormal formation of acid can therefore be readily accounted for. On the other hand, his experiments demonstrate that the exhibition of muriatic acid, which has become so popular of late in the various forms of dyspepsia, is not justifiable or even safe. Too much acid in the treatment of diseases of the stomach is as undesirable as too little. Muriatic acid can be useful only in those cases where a lack of the required quantity of acid is evident. P.

On the Action of Ergot.—Dr. R. Kobert, in the *Archiv für Experimentelle Pathologie und Pharmacologie*, December, 1884, contributes a paper on the Action of Ergot. He concludes that the freshly-prepared ergot will undoubtedly produce strong contraction of the uterine muscles. This is a well-established fact, one which the Chinese possessed a knowledge of a thousand years ago. Ergot is capable of producing contractions of the uterus sufficient to cause delivery and produce abortion, and is also capable of inducing contractions sufficient to control hemorrhage from that organ.

He has received positive proof of the poisoning in animals. Cows which eat the ergot while in pasture frequently abort. He considers it almost useless to administer ergotin by the mouth, as it cannot, after reaching the stomach, induce any uterine contractions, because it becomes too much dissolved and weakened. He also claims that, while the subcutaneous injection of ergotin may sometimes induce uterine contraction, few preparations are to be considered reliable. Ergotin, he thinks, is active only when it contains cornutin. P.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 7, 1885.

EDITORIAL.

TREPHINING THE SKULL FOR A GROWTH IN THE BRAIN.

IN our London letter is the fullest account that we have yet seen of the case of Dr. Hughes Bennett, in which, after a diagnosis of a localized lesion in the cerebral convolutions, Mr. Godlee trephined and removed a neoplasm. Strangely enough, as it appears to us, this case was immediately published in the *London Times* as a triumph of vivisection, the sole credit being awarded to Ferrier's experiments for the successful operation. A glowing picture was given of the salvation from certain death of the patient, and a contrast drawn between the restoration to health and usefulness of the bread-winner of the family and the value of sundry monkeys and dogs which had been sacrificed in order that the profession might gain the necessary knowledge to treat the case. Unfortunately for this argument, as it happened, the patient perished with meningitis, and most distinctly was not cured by the operation. In an editorial "On the Justification of Vivisection" in the *British Medical Journal* this case is discussed at length, but the impression given by the description is that the diagnosis and operation were solely directed by the interpretation of the symptoms furnished by physiological experiment. "Guided by these symptoms," are the words, "a tumor was diagnosed in the cortex, in the upper part of the fissure of Rolando."

The account given by our highly esteemed London correspondent, however, throws more light upon the case, and communicates features which had not previously been published, so far as we are aware. There was a history of a blow upon the right side of the head (it will be remembered that this is the common history of glioma), followed by excruciating pain over the vertex, with a spot of localized tenderness on deep pressure in the upper parietal region a little to the right of the middle line, the symptoms of twitching of the muscles of the left side of the face, and convulsive seizures in the left arm and leg, followed by monoplegia of the arm and paresis of the leg, with attacks of vomiting cerebral in character. Upon such a basis modern surgery could make, and undoubtedly did make, the diagnosis of a small tumor involving the cortex in the position indicated, with sufficient certainty to warrant the operation. Thus far the credit might certainly be divided between clinical surgery and Hughlings Jackson, to whom we owe much of our knowledge of localized discharging lesions in the brain. Take away the history of the case, the localized tenderness and pain, the Jacksonian epilepsy, and leave only the symptoms of monoplegia and paresis, and it would be a bold surgeon who should operate in a case with nothing more to guide him than the information afforded by the study of motor centres in the brain made by Hitzig and Ferrier, especially if he were at all familiar with the writings of Brown-Séquard upon the same subject.

This is not written to decry the value of vivisection (it cannot be denied that cerebral localization aided in the diagnosis), but to discourage what appears to be a tendency to exaggerate the value of physiological experimentation at the expense of clinical medicine and surgery. Vivisection owes its justification to its ability to contribute to knowledge, and not to the result of attempts to utilize that knowledge in medical practice, attempts which may be premature and injudicious. Dr. Klein was certainly right in taking the

position before the Royal Commission that vivisection is to be practised with a view of adding to our stock of knowledge, and not with any idea of its immediate practical application to medicine. In this view those engaged in original investigations generally concur.

THE INSANE DEPARTMENT OF THE PHILADELPHIA HOSPITAL.

SOME of the members of the consulting medical staff of the Philadelphia Hospital have presented a communication to the Board of Guardians pointing out many glaring defects in administration, in the Insane Department especially, arising, it is distinctly stated, through no fault of the chief medical officer, Dr. Richardson, who is doing the best that he can under adverse circumstances, hampered as he is by official parsimony and Bumble-ism. The present buildings are obviously unfit for hospital purposes; they are ill ventilated, and are so shamefully overcrowded and under-attended that poor insane patients cannot under present circumstances receive either proper medical attention or have their physical necessities decently provided for. The Insane Department should be removed to a distance from the city, out into the open country, where appropriate buildings should be provided, and where the insane might be classified and receive all the advantages of skilful and considerate treatment. Humanity and justice demand that the wards of the commonwealth shall be kindly cared for.

We hope that the matter will not be allowed to rest until the city authorities rise to the appreciation of the necessity of providing accommodations more in keeping with the high standing of the community. In the mean time, should a fire occur at Blockley, the Kankakee horror might be re-enacted at our very door. The move has not been taken in this matter any too soon.

INTERNAL URTICARIA.

A VERY interesting communication was made during the last month to the Clinical Society of London by Dr. J. J. Pringle, on a case of recurrent hæmatemesis associated with and possibly due to urticaria. The patient had had a series of attacks of urticaria due to errors in diet apparently. Finally, after several years, the spells occurred with increasing frequency and severity; the tongue, mouth, and fauces now showed symptoms of disorder, and there was vomiting of a clear, watery fluid. During the succeeding year urticaria was almost constant, and at intervals attacks of great severity occurred, during which large quantities of pure red blood were vomited. There were no purpuric wheals or spots detected. Associated with this condition was a hypertrophy of the heart. The hemorrhage was thought to be due to capillary rupture. He subsequently had attacks of gout.

In discussing the paper, Sir Andrew Clark said that he had upon a former occasion pointed out the association of asthma with urticaria, regarding the former as an urticarial affection rather than a spasmodic one. On the other hand, systematic writers on dermatology consider asthma as one of the causes of urticaria.

ÆSTHETIC ORCHIDECTOMY.

AN editorial in a contemporary upon the Semiramidian operation states that "the testicles have been removed in order to secure sopranos for the Church," but does not state from what the innocent sopranos are to be made secure. Can it be possible that they are in greater danger of molestation or feel a greater sense of insecurity among those of the male sex whose register embraces the upper notes of the scale than from those who by nature are less aspiring in their vocal efforts? Is the tenor more base than has been suspected, and the bass less so? We pause for a reply—from the sopranos.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

WHEN Professor Ferrier went down to the West Riding Asylum, near Wakefield, at Easter, 1874, the writer accompanied him, and was a witness and a voucher for the earliest of those experiments on the brain which have since made Ferrier's name world-famous. After seeing a good deal of his work, the writer expressed himself to the effect that before ten years were gone and past some surgeon would remove a tumor of the brain under the direction of some physician. The diagnosis would be so precise that the surgeon could be told the exact spot for his trephine. That forecast has been verified. Dr. A. Hughes Bennett (son of the famous John Hughes Bennett, Professor of the Institutes of Medicine in the University of Edinburgh) recently diagnosticated the position of a tumor in a man's brain, and under his instructions Mr. Rickman Godlee, Assistant Surgeon to University College Hospital,—a man of rare promise,—cut through the skull and removed the tumor, with immediate relief to the symptoms. The case got into the journals, and thereupon a storm began to blow. Such a proceeding was so direct an outcome of knowledge founded upon experiments on animals—not only the diagnosis, but the line of after-treatment even which rendered such an operation defensible—that, of course, the anti-vivisectors must be stirred up. These cantankerous mortals having taken up the position that nothing had been learned from experimentation upon animals, that nothing worth the having had come out of the cruelty to animals, and had been so blatant about their opinions,—now an opportunity having come for taunting them, it must be made the most of. Putting up a red rag to a bull excites that animal; and a letter in the *Times* giving an account of the case and the operation roused them into action like a swarm of hornets. Letter followed letter until the public must pretty well comprehend the merits of the case by this time. Unfortunately, as it happened, the man died of an after-consequence of his surgical wound (meningitis), and so the anti-vivisectionists have a leg left to stand upon. Still, the operation was a success and a path-breaking experiment which must lead to a new departure in the treatment of encephalic disease. Not unlikely the trephine and the aspirator will come into play ere long in serous effusions, and even in apoplexy when blood is being poured out and compressing the contents of the skull.

One outcome of all this contention is to bring Professor Ferrier and his work prominently before the public, doubtless to his professional advantage. Unfortunately, however, the professor happens to be a man cast in a sensitive mould, and the attentions of his enemies are very unpalatable to him. Most men would thank their stars for such an opportunity of coming before the public, and look upon the assaults of these enemies as blessings in disguise; but not so in this case. It was no doubt highly unpleasant to read at breakfast that three barristers have applied for a warrant for you at Bow Street, as Professor Ferrier did some time ago when the anti-vivisection party thought they had caught him at a disadvantage; but there is a silver lining to the cloud, or a golden lining, rather, perhaps!

Another outcome is, of course, the spread of a knowledge of the nervous system and its diseases, now so rapidly advancing with mighty strides. Perhaps some account of the case may be welcome to your readers. The patient was a healthy young man who, four years ago, was hit on the head by a piece of timber, but not so severely as to lay him up. Occasional headaches came on after this, and then occasional twitchings of the tongue and left side of the face. Then the "fit" ran from thence down the left arm and leg, without loss of consciousness. At intervals he had more complete convulsive seizures. Twitchings of the face and arm occurred daily, but never together. Loss of power in the left arm followed, and, later still, weakness in the left leg. The general health was good, but pain over the vertex was frequent and violent,—that excruciating pain which Dr. Moxon (in his articles on headache which appeared in the *Lancet* a few years ago) has described as occurring with organic disease of the brain. Tenderness on deep pressure was found in the upper parietal region, a little to the right of the middle line. Cerebral vomiting was also present. The congeries of symptoms told of cerebral mischief, probably a tumor. Further indications pointed to its locality,—viz., the right side of the head and near the motor centres in the neighborhood of the upper third of the fissures of Rolando.

Dr. Bennett argued that it must be of limited size, as the hand-centres were alone severely injured, irritation only being exhibited in the leg, face, and eyelid. It was a careful diagnosis, which every unprejudiced mind will admit could not have been made, or even approached, without the knowledge derived from the early experiments of Fritsch and Hitzig, and the more complete and elaborate work of Ferrier. The only aid that could be given to the patient was the removal of the growth, which was clearly near the cortex. Mr. Godlee removed a triangular piece of the skull, slit up the dura mater, and exposed the surface of the brain. Nothing abnormal was to be seen. Still, so confident were all in the accuracy of the diagnosis that an incision was made into the brain, when a hard glioma was felt, which was about the size of a walnut. It was removed without

difficulty. The hemorrhage was arrested by the galvano-cautery, and the edges of the scalp brought together by sutures. The result was magical. The vomiting ceased, the lancinating pains in the head vanished, the convulsions disappeared, and the patient felt well and expressed the greatest gratitude for the relief so afforded to him. For twenty days this went on, the only cause for anxiety lying in the wound, which was not satisfactory. Then, unfortunately, symptoms of acute meningitis set in, to which the patient ultimately succumbed. The progress of the case, however, was such as to demonstrate the effects of the removal of a tumor of the brain as regards relief to the symptoms it set up. The untoward result was one of the accidents which attach to the serious operation of trephining, and had no special reference to the malady for which the operation was performed.

The scene of this operation will some day be put on canvas, and the operation itself will become historical. The practical outcome of vivisection was completely satisfactory as illustrating what we owe to careful experimentation. And if Professor Ferrier's experiments still need any justification, that is now forthcoming. The experiments performed by Professor Gerald Yeo teach us that, with antiseptic precautions, injuries to the brain can be inflicted with practical impunity. It is impossible to criticise the surgical after-treatment of the case until it has been laid before the profession in its entirety; but it is not absolutely out of the question that there may yet be some details in skull-wounds, which further familiarity therewith may teach us, entailing dangers that are avoidable. It is a great pity, under the circumstances, that the man died; but he lived long enough to establish the value of the operation.

Beyond its direct value to the profession, this case is a triumphant vindication of the value of careful experimentation upon the lower animals, and of the accuracy of those observations which have made Ferrier so well known. Without these for a map of the brain, it would be impossible to interpret the complex symptoms furnished by clinical observations. Without them, indeed, these last, however carefully collected and laboriously sifted and arranged, would have remained a mass of fragments which no genius probably could ever have cast into form. But by the light thrown on the brain and the functions of each part of it by experiments performed upon the brains of animals (which are clearly built upon the same plan as that of man) it is now possible to construct a correct diagnosis of what is going on in the brain beneath the bony skull. If Dr. Bennett could have made the coverings of the brain transparent,—nay, more, could he have peered into and seen through the cortical substance of the brain itself,—he could not have ascertained more than he did, or been more accurate in his diagnosis than he actually was. Twenty years ago such a diagnosis was out of the question,—indeed, no one would have attempted it; and now no one is taken by surprise, and all take the case in a matter-of-fact way. We are already so familiar with the localization of function in the brain that, instead of any surprise, indeed, we receive the announcement of the novel procedure as something that we have been looking for, with the gratification, however, of having our anticipations realized for us and our faith corroborated. Fritsch and Hitzig, and still more my countryman, Ferrier, have not only mapped out the brain, but they have done much for suffering humanity.

The other matter which is exciting attention in the medical world here at the present time is that of a teaching university for London. Strange as it may appear, London has, until very recent times, had no university at all, and the one it possesses at present is merely an examining board. The information required has to be sought and gained somehow and somewhere; not promiscuously, however, but from certain recognized teachers. A man presenting himself for the M.B. of London has to furnish certificates of having attended sundry lecturers whose lectures are "recognized by the University of London." Logically it ought to be seen if he possesses the requisite knowledge when put to the test, but he ought to be allowed to acquire it as, where, and how he pleases, provided he has got it. Where the man who seeks his B.A. London has to get his lore is unknown to me, but he has to acquire a fair lot somewhere. From time to time attempts have been made to start a regular university in London, but so far the attempts have signally failed. It is very desirable, from the medical aspect of the subject, that such an institution should exist; at least so I think, as an old Edinburgh University man. Before a man can be chosen a Professor, he must at least have manifested some familiarity with the subject of which he has to treat; possibly, too, he may be required to have shown some capacity to impart knowledge, but this is quite a secondary affair. It is a well-recognized fact that some men cannot teach, while others can. The present Professor of the Institutes of Medicine in the University of Edinburgh is an instance of innate teaching-powers, and so also was his predecessor. On the other hand, the late Professor William Pulteney Allison, learned and wise as he was, had no knack of imparting knowledge, and even his work on "Pathology and Practice of Physic" is utterly unreadable by any one who is not perfectly familiar with the subject. But he fulfilled the first requisite in any degree,—viz., the possession of knowledge. The late John Goodsir, the famous anatomist, was as good an expounder and teacher as he was profoundly

versed in his subject. The professors of the University of Edinburgh were not only chosen men, but they gave complete courses of lectures. If a man attended the class regularly and took notes, he could pass in that subject without other reading, as many practically did. The student had no occasion for private tuition: he could have it if he pleased.

One matter was also recognized,—viz., that a student may learn from one man, but not from another. On this principle the University of Vienna has two professors on each subject, giving the student a choice. In Edinburgh this difficulty was met by allowing certain extra-mural lecturers whose lectures were recognized. But before each man got this recognition he had to do something to convince others of his fitness.

In London, unfortunately, things are very different. There are eleven teaching hospitals in London, each with a full staff of lecturers. Now, large as London undoubtedly is, it is possible to question whether the medical profession here could furnish eleven competent professors on each medical subject. Say medical jurisprudence, for instance. Are there eleven men competent to teach the subject fully? It is very doubtful. Yet there are at least eleven men who deliver lectures on the subject. I have had the curiosity to see of whom these eleven consist, and the less said on the subject the better as regards the list. Two, or perhaps three, have exhibited some special acquaintance with the subject, and two competent Professors of Medical Jurisprudence could certainly be found, but not eleven! Yet the lectures of these hospital-schools are recognized by examining bodies, one as much as the other.

But the teaching at the eleven institutions differs widely on each subject. At one school a certain subject is handled well, at another but indifferently, while with another subject the reverse occurs. Yet the student must take the lecturer as he stands, it being practically impossible (if not invidious) to attend that particular class at another school. If he can command the funds, he goes to some private teacher, who "grinds him up" on it. If he cannot afford to do this, he scrambles along as best he can. The number of schools in London is too great for the lecturers of each to be strong all round. Some are good, some are indifferent. If three sets could be rolled together and the best men picked out, then a competent lot could no doubt be found; and a very good thing this would be for all concerned. If there were four teaching hospitals instead of eleven, there would be far better courses of lectures delivered. Perhaps this would not be the opinion of all the present lecturers, but most would admit it. If there were only two lecturers or professors on each subject, it would be better still. A man then would be required to manifest some fitness for his vocation before entering upon it. As it is, at most of the schools, on many subjects a lecturer must be found when the man in office gets weary of it. How is this done? Either some junior has been working up the subject in the expectation of getting the lectureship, which is usually the case where the post is worth having, or, if the post be worth little, some man connected with the hospital is induced to fill the vacancy. He takes it to oblige his colleagues, in the hope of getting something more congenial to his tastes at a later day.

Looked at from this point of view, the selection of teachers in the Metropolitan schools is about as wretchedly irrational as any plan that fatuity could devise. It is a truly happy-go-lucky system; and inviting candidates to come forward for a vacant post and then letting them draw lots among themselves to decide the matter would be infinitely preferable, as more likely to secure a man both competent and willing to discharge its duties. That the present system is bad and undesirable is admitted, but the whole thing is too cumbrous to be readily dealt with. The plan of holding various lectureships in rotation is the potential worst. A man may have become quite competent to teach on one subject when the opportunity comes for his advancement, and a teacher of recognized capacity and complete fitness to teach pathology passes on from a place which he fills well to the chair of materia medica and therapeutics, for which he shows no special aptitude. Whether this is an advantage or otherwise to the school and all concerned, fortunately, it is not for me to pronounce judgment.

Then there is another aspect of this multiple teaching which is a very painful one to dwell upon. My information has come directly from the students themselves: if what I am going to say is untrue, I should be glad to know it. They complain that on several subjects at certain schools the lecturers are insufficient for the examination-table, and the student must get the desired information somewhere. If he is possessed of means, he can purchase it from some of the junior members of the staff who have private classes; if not, he must do as he can. If a teaching university of London would remove such a blot on medicine as this, and do away with such a scandal, it should be earnestly prayed for by all who wish the profession well. So far as medicine is concerned, a teaching university would be a boon.

J. Milner Fothergill.

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Œsophagotomy for Removal of Artificial Teeth.—At the Middlesex Hospital in London, last month, a patient was admitted who had swallowed a plate to which were fastened four front teeth. Mr. Lawson was obliged to remove it by opening the œsophagus below the cricoid cartilage. The patient is making a satisfactory recovery.

CHICAGO.

ACTINOMYCOSIS or not actinomycosis, that's the question which just now agitates several members of the profession residing here. Dr. Murphy claims to have had two cases of this rare disease in the course of a few months. To verify his diagnosis he called in aid Dr. Fenger, Dr. Belfield, and others, and they finally agreed that the cases were strongly characteristic of the disease. Doubters have been by no means wanting, and several claim that the cases were nothing more than simple abscess. A few of the unconvinced state that they had opportunity for microscopical examination under as favorable circumstances as those enjoyed by others.

The paper read by Dr. Murphy before the Chicago Medical Society gave an interesting account of his cases, but there was wanting that clinching argument, ocular demonstration. The only slide shown prepared from the contents of the tumor in one case failed to show the actinomyces.

The discussion which followed showed that the minds of many present were not satisfied, notwithstanding that the reporter had seen the fungus in specimens prepared from his cases. The Chicago correspondent of the *Boston Medical and Surgical Journal* has taken up the defence of those claiming the genuineness of the disease in these two cases. The editor of the *Medical Review* has taken strong ground in opposition, and a warm discussion is likely to pass through at least two or three of the journals.

The biennial reports of our hospitals for the insane have been issued, and show the same dearth of interesting information. The reports of the commissioners consist of little more than a statement of expenditure and an estimate of needs for the future. The medical superintendents give a brief statement of general condition of patients. Altogether, these pamphlets form a striking contrast to the reports issued by some of the English asylums.

It would appear that our institutions for the insane are making very slow progress in the systematic study of this class of diseases. Instead of giving, as one of the reporters does, a tabulated statement showing the rapid reduction of alcoholic stimulants consumed by patients to a quantity that barely permits of their use at all, why has he not given some information as regards the use of hypnotics and narcotics? The statement is made that mechanical restraint has been reduced to a minimum, and that certain forms have been abolished,—*i.e.*, "the muff;" but the writer goes on to say that the leather "mittens" are occasionally used, the difference being little more than in name. And again he says, "We have discarded the use of the camisole as barbarous, but the 'continuous sleeve' is sometimes used." This is another fine distinction. The reporter begins: "The insane have certain rights, among which is the right to be protected from self-injury while under the influence of suicidal impulses, and to be restrained from injuring others during attacks of homicidal mania or while under the influence of impulses to destroy clothing and other property." This is merely an argument for the perpetuation of mechanical restraint, and is not a justification. Where the use of this form of restraint ends and its abuse begins it is difficult to say. We know that in some English institutions it has been entirely done away with, and there is no reason why it might not be as radically treated as is the reduction of alcoholics. The mere enumeration of the varieties of mechanical restraint in use in some of our State institutions is sufficient to show how hard it is for our medical superintendents to radically reform this abuse. The portion of the report treating of employment for the insane is not new; nevertheless it is good, and were it properly put in practice it would probably facilitate the placing of our hospitals for the insane upon that higher plane where now stand the English institutions as regards mechanical restraint. The pathology of insanity has not as yet received any valuable additions from our institutions, nor is it likely to in the immediate future, if one may judge from present appearances.

On the morning of the 19th instant an important part of the Northern Hospital for the Insane at Kankakee was destroyed by fire, seventeen patients being consumed in the flames. To faulty construction and want of means for controlling fire, at least in part, this terrible disaster may be charged.

The readers of the *Chicago Medical Journal and Examiner* will regret to learn of the retirement of Dr. James Nevins Hyde from the position of editor-in-chief.

The health of the city has been fairly good during the early part of the winter. Typhoid fever has prevailed to an increased extent in some sections. M.

CHICAGO, January 20, 1885.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

ANNUAL meeting, January 15, 1885, FORDYCE BARKER, M.D., LL.D., President, in the chair.

Before proceeding to the scientific business of the evening, the annual reports of officers were read and officers elected, among others Dr. A. JACOBI for President and Dr. C. C. LEE for Vice-President.

THE COMMA-BACILLUS.

Dr. E. C. WENDT made a few remarks regarding the relation of the comma-bacillus

to Asiatic cholera, and exhibited some specimens of the microbe received from Dr. Koch.

AN OBSTETRIC FORCEPS AND A VAGINAL SPECULUM

were presented by Dr. W. D. SCHUYLER, who briefly explained the advantages of the instruments, that of the forceps relating to the short cephalic and marked pelvic curves. For a full description of the forceps he referred to the *New York Medical Journal*, March 4, 1884, and of the speculum, to the same journal, September, 1876.

Dr. F. A. CASTLE called attention to the fact that the instrument-makers had so modified the shape of Nott's speculum that the principles upon which the original instrument was constructed could no longer be recognized.

DISEASES OF FALLOPIAN TUBES; THEIR RELATIONS TO UTERINE DISPLACEMENTS AND THE USE OF PESSARIES.

Dr. W. GILL WYLIE read a paper with this title. Since May, 1883, he had operated in fourteen cases for disease of the Fallopian tubes,—in nine cases in Bellevue Hospital, and in five in private practice. Twelve patients recovered; two died of septicæmia on the fifth day after the operation. Eight were cases of pyo-salpinx, two of hydro-salpinx, and four of catarrh of the tubes with peritoneal adhesions. With one or two exceptions, there were extensive adhesions, local peritonitis, and the ovaries were either diseased or more or less covered with adhesions. Short histories were given of fourteen of the cases, and twelve specimens presented, together with the report of the microscopist, Dr. H. C. Coe, at the New York Pathological Society, January 14.

On account of the lateness of the hour, Dr. Wylie read only some of the more important points in his paper. With regard to the etiology, he said that anything which can cause endometritis may also induce disease of the Fallopian tubes, and it is probable that most cases of salpingitis were due to direct extension of disease from the lining membrane of the uterus to that of the tube. In virgins salpingitis is comparatively rare, except from catarrhal disease. In the imperfectly developed and delicate the mucous membrane of the uterus is an easy prey to catarrhal disease, which may extend up into the tubes. Tubercular disease might also attack the Fallopian tubes. Many of the medical profession look upon gonorrhœa in women as a very trivial disease, probably because, unlike in the male, it does not cause urethral constriction. There can be no doubt that gonorrhœa is a very frequent, and in many instances an unsuspected, cause of salpingitis. When once it enters the uterus it cannot be safely treated locally until after it has become subacute, because of the danger of causing localized peritonitis. Specific endometritis will in many instances, although treated with the greatest care, cause salpingitis and local peritonitis. It may end in pyo-salpinx, but usually the tube becomes distended from constriction of the proximal extremity, and the poison is liable to extend to the surrounding tissues. Syphilis might cause salpingitis, as it does otitis and ozæna. Septic poisons after abortion or labor are frequent causes of salpingitis; and obstructed effete matter within the uterus may be forced into the tubes by contraction of the uterine fibres.

Local peritonitis is much more common upon the posterior than upon the anterior surface of the broad ligaments, because the tubes open upon the posterior surface. His experience led him to attach much more importance to local peritonitis than to local cellulitis: indeed, he did not believe in so-called chronic cellulitis.

Diseased tubes are very commonly associated with diseased ovaries, and in most instances the disease of the tubes precedes that of the ovaries. When there is ovaritis, it may be regarded as due to extension of disease from the tubes and peritoneum. There are, however, certain diseases of the ovaries, as cancer, which may cause secondary disease of the tubes. In hystero-epilepsy and hysteria he expected to find a cystic or atrophied ovary following catarrh of the tubes. Hemorrhage into the tubes, and the presence of other fluids, may cause more or less permanent distention.

The subjective symptoms are so varied, and salpingitis is so frequently associated with uterine diseases, that it is often overlooked or not distinctly made out. The most important subjective symptom was pain in the iliac region, which is more marked in pyo-salpinx than in hydro-salpinx or catarrh of the tubes. Pyo-salpinx, especially if accompanied by abscess around the tube, causes marked local pain and, usually, more or less tenderness.

The objective symptoms up to a recent date were regarded as only imperfectly clearing up the diagnosis, but Dr. Wylie thought that by allowing an acute case to become more or less subacute, and then introducing cotton pledgets containing glycerin and alum around the cervix two or three times a week, within from three to six weeks the condition of the parts would have become so changed as to permit of a positive diagnosis in almost every case in which there was disease of the tubes or ovaries, especially if the patient were examined under ether.

With regard to the pathology, an accurate account of it is scarcely to be found except in the German. The difference in the shape, size, and position of the mucous canal of the Fallopian tube and that of the uterus causes a marked difference in the result of the same disease in the two localities. Inflammation

of the endometrium, producing enlargement of the uterus, may of itself cause displacement, imperfect drainage, and parametritis, but this is not the rule. Moreover, the uterus is accessible and amenable to local treatment, whereas a like inflammation of the lining membrane of the tube is not accessible, is almost certain to result in prolapsus of the tube, obstruction of the inlet causing imperfect drainage, and peri-salpingitis from emptying of the contents into the peritoneum. Salpingitis nearly always becomes chronic, in many instances lasting as long as the patient. The first effect of the disease reaching the tube is to cause it to become engorged with blood, to sink lower in the pelvis, and, as salpingitis is nearly always associated with an enlarged uterus, this organ also will sink, and, as the patient in the acute stage lies upon the back, the fundus is thrown backward by gravity, the peritoneum becomes inflamed, lymph is thrown out and glues the different organs together, and, as the acute stage subsides, draws them out of their normal position; the twisted broad ligament then holds the uterus in the position of retroversion. The organ may sink lower, being drawn down by contracting adhesions, and perhaps become retroflexed. The tubes, contracting, may also become strong cords, binding the uterus firmly in the position of retroversion. This fixation of the tissues may be so marked that any attempt to lift the uterus and hold it up by pessaries would cause rupture of the tube and emptying of its septic or irritating contents into the peritoneal cavity. By proper treatment in time we might be able to replace the fundus, but to keep it replaced is the greatest difficulty. If but one tube were affected, the retroversion would be less marked, and the organ might be drawn toward the affected side. When but one side is the seat of disease, it is usually the left.

The character of the fluid contained within the tubes varies; it may be transparent water, milky, thick, greenish, or broken-down pus. In the majority of his cases the tubes are infiltrated with pus and serum, and in some instances the tissues become so rotten that the ligatures cut through the degenerated stump. In some the tissues were not sufficiently contracted to enable the ligature easily to grasp the stump. The most common affection of the ovary, if it were diseased at all, is cystic degeneration. Superficial cysts with thin fluid are commonly found, but deep-seated, central cysts might fairly be called degeneration, and it was to these that he referred in speaking of cystic degeneration of the ovaries.

Treatment.—In cases in which there are adhesions and we are not allowed to operate, he would not resort to the use of pessaries, hoping to replace the uterus and keep it there by such supports; he would be satisfied if he could render the uterus movable, and thus improve the whole general circulation of the pelvic organs, thereby giving the patient more relief than if any attempt had been made to employ pessaries. He had succeeded in tapping in two or three cases in which he was not allowed to operate, and in one of the cases a cure was effected. But it was believed that the enlargement was an abscess formed in an old hæmatocele. The other two patients were benefited, but not cured. When disease of the tubes can be clearly recognized, the patient is bedridden; complete removal of the tubes and ovaries alone would give relief.

In the operation, the abdominal opening should not ordinarily be made greater than the width of the three fingers, admitting only two,—thus guarding against ventral hernia. It is important for the same reason, in closing the wound, to obtain perfect apposition of the fascia as well as of the peritoneal surfaces. He usually gives the patients pancreatized milk during the four or five days preceding the operation, to guard against distention of the gut from gas. If the omentum appear to be formidably adherent, by passing two fingers down through the opening and moving them from side to side, one would be enabled easily to tear away the adhesions. It might, however, be necessary in some cases to tie the omentum below and above and cut a part away. In order to get at the ovary directly and to obtain a suitable pedicle, the broad ligaments should be unrolled.

Dr. E. NOEGGERATH was asked to open the discussion. He repeated what had been stated at the last meeting of the International Medical Congress, that to call this Tait's operation was a misnomer, for Hegar had performed the operation in forty-two cases before Tait's experience was known. Regarding gonorrhœa as a cause of salpingitis, he had made special studies in Berlin to establish the gonococcus, but the gonococcus was a diplococcus, and no gelatin had been obtained in which it could be raised beyond the second or third generation. If dislocation of the uterus was to be considered the result of salpingitis and peritonitis, he would have to repeat what he said in 1872, that the form of dislocation was latero-version combined with anteversion. He did not doubt that Dr. Wylie had seen cases in which a sufficient amount of plastic material had been thrown out to carry the uterus backward, but such cases were exceptions. In ninety per cent. of the cases of retroversion he thought the uterus could be replaced and kept there by instruments, and the cases in which we could not replace it because of posterior adhesions were very rare. In other words, a large percentage of retroversions are not accompanied by adhesions.

As to the diagnosis of salpingitis, those cases in which there is ordinary salpingitis with very slight exudation should be considered

apart from those in which there was salpingitis in its later stage, pyo- or hydro-salpinx already present. In the first place, it is not necessary to feel the tubes at all in order to make a diagnosis. If there is perimetritis with catarrh, with minute condylomata about the hymen and labia minora, we know that there is also salpingitis, because the cases in which perimetritis exists without salpingitis are extremely rare.

With regard to the surgical diagnosis in case an operation were proposed, it is the shape of the tumor that is of the greatest importance. The tumor of salpingitis is very often not single, but divided into two or three sections, having the shape of a cone running in the direction of the lateral diameter of the pelvis. He believed, with Dr. Wylie, that in the extreme cases referred to no treatment other than an operation would prove successful. But the large majority of cases of salpingitis are not ready for an operation, and something else must be done. The treatment here would be very much like that described by the author of the paper; but that which he had found most efficient was the use of the waters of Franzensbad, of Bohemia.

Dr. A. J. C. SKENE said that, so far as his observation went, it is rare to see disease of the Fallopian tubes not preceded by gonorrhœa. But he differed from Dr. Noeggerath in his statement that we rarely see pelvic peritonitis without disease of the tubes.

In the diagnosis the practical difficulty seemed to him to be to distinguish between a small ovarian cyst more or less prolapsed and pyo- or hydro-salpinx. He would inquire what might be the value of aspiration in diagnosis. If we find ciliated epithelium so generally present in pyo- and hydro-salpinx, what objection could there be to the removal of a portion of the fluid and examining it for diagnostic purposes? Out of twenty-one specimens which he had examined, eighteen contained ciliated epithelial cells, indicating that this condition was present.

As to treatment, it had been well remarked that many patients are operated upon before other means had been exhausted. He thought that if a hydro-salpinx were aspirated the fluid might not reaccumulate, and the patient would recover.

Dr. P. F. MUNDÉ said that since he had begun the study of this subject, some years ago, the greatest difficulty which he had met was in the diagnosis of these cases of salpingitis. The cases which most require an operation, the cases in which the swelling in the pelvic cavity consists of a diffuse fulness, he had always found the most difficult of diagnosis. He doubted whether we should be able to make a *positive* diagnosis until after laparotomy had been performed. As regards the influence of inflammation of the tubes upon displacement of the uterus, he was disposed to agree with Dr. Noeggerath in his views of lateral displacements and some anterior displacements; but he had also seen some cases in which the uterus was retroverted, bound down, and accompanied by marked salpingitis. He was rather disposed to think that they are as common as lateral and more common than anterior displacements. He agreed with Dr. Noeggerath that in the majority of cases of retroversion the uterus is not adherent. So far as treatment was concerned other than laparotomy, he thought we can do but very little. There had been certain cases of diffuse swelling in which he had given the patient relief from pain by means of the galvanic battery.

Dr. WYLIE, in closing the discussion, said he was satisfied that if Dr. Mundé would adopt his preparatory treatment he would also be able to map out the exact condition of the pelvic organs in cases of salpingitis, and so decide as to the necessity of an operation. As to treatment by aspiration, he thought it would require more than a withdrawal of the fluid to effect a cure: it would also be necessary to have perfect drainage. In cases demanding an operation he thought the rule not to tap any abdominal tumor in a case in which it was intended to perform laparotomy should be observed. With regard to retroversion associated with salpingitis, his experience had been that in women who had never borne children lateral version or anterior version is common, but in the majority of cases of women who have borne children there is retroversion, and especially so if the salpingitis be due to septic endometritis extending to the tubes.

STATE BOARD OF MEDICAL EXAMINERS.

Dr. C. C. LEE, Chairman of the Committee on Education, reported that, after a full and careful consideration of the resolutions (on proposed State Board of Medical Examiners) referred to it at the last meeting of the Academy, the committee deems it inexpedient for the Academy of Medicine to take any action at present in regard to the establishment of a State Board of Examiners for the granting of license to practitioners of medicine in this State. The report was accepted.

Dr. F. R. STURGIS made some remarks upon the importance of having the licensing power to practise medicine separate from the teaching power, and asked that the Academy adopt resolutions expressing its belief that the best interests of the public and medical profession would be served by the passage by the Legislature of a bill appointing a State Board of Examiners, and that its delegates to the State Society be instructed to support the passage of such a bill.

After some remarks by Dr. Roosa, Dr. Hanks, and the President, Dr. Sturgis consented to laying the resolutions on the table at present, expecting that they would be acted upon at a future meeting.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, January 8, 1885.

The President, Dr. SHAKESPEARE, in the chair.

A NUMBER of specimens were exhibited at the opening of the meeting.

Primary tumor of the liver in a child nine months old.

Aortic valvular disease with rupture of one of the leaflets.

Malignant tumor of the kidney.

A large renal cyst. The foregoing were all presented by Dr. SHAKESPEARE.*

Sarcoma of the clavicle. Presented by Dr. G. E. DE SCHWEINITZ.

This specimen was sent to me by Dr. John Ashhurst for microscopical examination, and he kindly gives me permission to exhibit it to-night. The tumor occurred in the person of a young girl, S. L. B., aged 16, who came to him for treatment last August. She was a somewhat frail-looking, clear-skinned blonde, whose general health up to the time of the appearance of the growth had been satisfactory. The family history was good; none of the other five children composing the family presented any similar affection, nor was there any history of tumor for two generations back. The tumor began at the left sterno-clavicular joint as a small nut-shaped swelling, having arisen without known inflammatory or traumatic origin, although, as the father stated, they always believed that the patient had in some way and unknown to herself received an injury at this point. The growth of the tumor was rapid, and at the end of five months stood out as a prominent swelling, as large as an orange, occupying the inner two-thirds of the clavicle, and was covered by somewhat reddened and thinned skin. Pain, although not constant, was at times a very severe symptom. On the 7th of last August Prof. Ashhurst removed the growth, together with the inner two-thirds or three-fourths of the clavicle. Examination of the gross specimen shows it to be a spindle-shaped growth, about four inches long, three inches at its greatest breadth, and two inches deep, which has taken its origin in the medullary cavity of the bone gradually, and become surrounded by a firm fibrous or periosteous capsule. The true tumor-tissue is of moderate consistence and reddish-brown color. Microscopic examination reveals the following points of interest. The capsule is composed of dense fibrous tissue, from which prolongations pass, dividing the tumor into numerous spaces which are filled with small round sarcoma-cells. These spaces are in many places again divided by a delicate spindle-shaped tissue into small alveoli. In addition to the round cells, spindle-shaped cells are also seen in spots; giant-cells are absent, or at least only a few multinucleated cells, relegated to the regions of the spindle-cells, are noted. The tumor, I think, should be classified as a small round-celled sarcoma, with an alveolar arrangement. If this tumor be accepted as a variety of alveolar sarcoma, it is somewhat unusual. Twice before specimens of alveolar sarcomata of the long bones have been exhibited to this Society,—one of the femur, by Dr. Nancrede, and one of the knee-joint, by Dr. Formad. At that time Dr. Formad thought the variety of the sarcoma justified a rather more favorable prognosis than usual, while Dr. S. W. Gross, during the discussion, after referring to the somewhat unusual microscopical character of the tumor, thought the outlook for the patient was bad, as this variety of sarcoma is peculiarly fatal. Dr. Formad's prognosis was correct, because in that instance the patient was alive and well, if I am not mistaken, for some time after the operation, and may be now, for aught that I know. In regard to the result of the present case, I am able to speak quite definitely. Although the operation was successful and the removal of the growth quite complete, the hemorrhage insignificant, and the recovery of the patient satisfactory, in about two months after the operation the growth reappeared either in the old wound or about two ribs lower. In this case, then, the truth of Dr. S. W. Gross's remarks have been only too thoroughly proved.

Dr. SHAKESPEARE said that this specimen was of interest on account of the rarity with which similar ones had been presented to this Society. Through the kindness of Dr. De Schweinitz he had the opportunity of examining sections from the growth, and he thoroughly agreed with the exhibitor as to its nature.

Dr. SIMES had also examined microscopic sections, and endorsed the statements made by the preceding speaker.

Alveolar sarcoma of the kidney. Presented by Dr. M. LONGSTRETH.

The patient, J. E., æt. 9 months, was first under the care of Dr. McOscar,—to whom I am indebted for the specimens and this history,—suffering from an attack of summer-complaint. The patient was at that time three months old, and had been ill for a week or two. He was in a state of great emaciation, and, upon examination of the abdomen, a swelling was found in the right flank. The little patient recovered from the bowel-trouble, but the general condition did not materially improve. During the remaining six months of life the child was only occasionally under observation, and at those times suffered from paroxysms of pain, apparently in connection

* The notes of the above cases have been withheld for future publication, and, in consequence, the interesting discussion upon them, in conjunction with the case presented by Dr. M. Longstreth, must also for the present remain unpublished.—RECORDER.

with the tumor. The bulk of the tumor, as felt through the abdominal wall, did not seem to increase greatly up to his death. The urine was not carefully inspected. Three days before death the pain increased to great violence, and in this condition death came. The post-mortem examination showed the enlarged right kidney more firmly adherent to the posterior abdominal wall and to the ascending colon and mesentery, as well as portions of the small intestine attached to its anterior surface. The diseased organ weighed fifty-two ounces, and presented itself as a rounded, slightly oval mass, regular in outline, smooth of surface, and with a moderately firm, elastic consistence. The capsular surface was pretty dense, of shining whiteness, with conspicuous small vessels passing over it. On section—which measured three and one-half inches by three inches in the two diameters—the tissue presented a very varied appearance. In parts it was of a dense white, perfectly homogeneous aspect; in others, the pinkish-white mass showed streaks of yellow, with numerous small spots of red, and there were also large blood-red areas. In other parts the tissue was breaking down into cysts, of which several large ones were present, the largest of the size of an English walnut. The cysts were all situated on the periphery of the mass, but they did not cause any protrusion of the capsule. At the upper extremity of the mass there was found a portion of kidney-tissue not invaded by the new formation. On section, this portion occupied about half an inch of the long diameter of the mass, and was seen to be separated from the new growth by a thin partition of connective tissue; externally it showed itself like a lobule of kidney, fitting like a cap on the spherical tumor, as does the suprarenal capsule on the kidney itself. The microscopical examination showed the new formation to be a small round-celled sarcoma. The greater portion of all sections presented cells nearly rounded in figure, embedded in a perfectly homogeneous basis-substance. The uniform area of cells was, however, interrupted by streaks of spindle-cells, running in narrow bands, enclosing greater or less areas of round-cell tissue. These circumscribing bands of spindle-cells sometimes formed circular areas looking like the cross-section of a tube; in other places the bands pursued a very tortuous course, resembling the outline of a twisting, undulating tube cut in a longitudinal direction. The bands of spindle-cells were never of great breadth, rarely more than four or five spindles. The spindle-cells were not regularly or closely fitted, but were embedded, like the round-cell elements, in a homogeneous basis-substance. In the spindle-cell bands there were occasionally seen fine capillaries filled with red blood-corpuscles, which sometimes ran along for a considerable length; many other capillaries were seen cut transversely or obliquely, also in the spindle-cell tissue many areas of hemorrhage were visible. In many places a scanty fibrillar tissue, with various-shaped nuclei, oval, angular, and spindle, was seen. This tissue was thrust in and filled the interstices between the areas of round cells circumscribed by the spindle-cell tissue. Thus, in the section one passed from areas of round cells to the narrow bands of circumscribing spindles, and then into fibrillar tissue with open meshes, apparently without any intercellular basis-substance. The whole picture resembled the cortical portion of the kidney, transformed by the presence of a new growth; the lumina of the convoluted tubes, greatly enlarged, were filled with a round-celled homogeneous basis-substance tissue, the base-membrane of tubes transformed into spindle-cell bands, and finally areas of hyperplastic, intertubular connective tissue, in which, or along the basement-membrane of the tubes (spindle-cell bands), ran the intertubular capillaries. The left kidney weighed five ounces. On section, it presented a normal aspect; the capsule separated easily, was not thickened, and the surface of the kidney remained smooth. The microscope showed no alteration of its tissues. The liver was large, smooth, blunt-edged, pale; under the microscope a very high degree of fatty infiltration was found. The other organs showed nothing especial to note. No secondary new formations were found.

NEW YORK PATHOLOGICAL SOCIETY.

ANNUAL MEETING, JANUARY 14, 1885.

The President, GEORGE F. SHRADY, M.D., in the chair.

FOURTEEN CASES OF TAIT'S OPERATION.

DR. W. GILL WYLIE presented twelve specimens, and related the histories of fourteen cases in which he had performed laparotomy for the removal of the tubes and ovaries for salpingitis. The histories were accompanied by the report of the microscopist, Dr. H. C. Coe. The cases formed the basis of a paper on "Diseases of the Fallopian Tubes; Their Relations to Uterine Displacements and the Use of Pessaries," an account of which will be found in our report of the New York Academy of Medicine meeting of January 15 (see page 362).

Dr. JOHN A. WYETH presented a patient showing the result of an operation upon the lower jaw, reported at the last meeting. He also briefly referred to a case in which he performed an operation upon the jaw after anæsthetizing the parts by hydrochlorate of cocaine. The patient felt no pain whatever during the continuance of the operation.

Among the officers elected for the ensuing year were Dr. John A. Wyeth for President and Dr. George F. Peabody for Vice-President.

PHILADELPHIA CLINICAL SOCIETY.

AT a stated meeting held December 26, 1884, Dr. HENRY BEATES, Jr., in the chair, Dr. JAS. B. WALKER reported a case of "Ulcer of the Stomach." (See page 348.)

DISCUSSION.

Dr. A. V. SCOTT had used rectal alimentation in a similar case with success. Cinchonidia sulph., in twenty-grain doses, was given with the food.

Dr. E. E. MONTGOMERY did not hear the whole report of the case, but was reminded by the concluding remarks of two cases seen the previous year. The first was an old gentleman suffering with gastric catarrh and gastralgia, the latter appearing both before and after meals. Under rigid diet the pain after food-ingestion was controlled, but that occurring during the empty condition was not lessened. Food was taken frequently. After several months of suffering, the patient was carried off by an attack of pleuro-pneumonia. The post-mortem appearances indicated commencing carcinoma. The kidneys were not granular.

The other case was confined to bed six months with constant vomiting of food in a sour condition. All food was rejected with impartiality. Dr. Bartholow, being called in consultation, found evidences of specific lesions, which had been denied by the patient. After using mercurials in vain, however, another consultation developed the suspicion that we had a case of hysterical vomiting to deal with, and under appropriate treatment the patient quickly recovered.

Dr. L. BREWER HALL desired to bear testimony to the value of turpentine in hemorrhage of the stomach. The good results of its use are immediate, and it is also of value in pulmonary hemorrhages. The oil of erigeron may be used instead, and is more acceptable to the taste.

Dr. HENRY BEATES, JR., asked Dr. Walker if he still looked upon the micaceous appearances of the skin as an evidence of carcinoma, and, if so, if it would not have been of service in the diagnosis of one of the cases related.

Dr. WALKER, in closing the discussion, said he had seen but two cases with the micaceous skin which were not carcinomatous, one being a case of pernicious anæmia. He looked upon it as only confirmatory. The use of oil of erigeron as a pleasant substitute for turpentine as a hæmostatic was suggested by the late Dr. Geo. B. Wood, but the accuracy of taste of the suggester was doubted. The speaker had taken a dose of it on a patient's complaint several years ago, and had not recovered from it yet.

In the cases simulating gastric ulcer the resemblance is interesting. The ejecta are more frequently sweet than acid in such cases. In unsuspected cases of carcinoma in plethoric subjects the peculiar appearance of the skin alluded to may be the only indication present of the real nature of the case.

As regards Dr. Scott's case, the course pursued seemed to embody all that was necessary. Total rest of the affected organ is generally sufficient. The bismuth may be useful.

AT the stated meeting held January 23, 1885, the annual election of officers resulted as follows:

President, Dr. Edward E. Montgomery.
First Vice-President, Dr. John B. Roberts.
Second Vice-President, Dr. Amy S. Barton.
Corresponding Secretary, Dr. Ida E. Richardson.
Recording Secretary, Dr. I. G. Heilman.
Reporting Secretary, Dr. Mary Willits.
Treasurer, Dr. L. Brewer Hall.
Councillors, Dr. James B. Walker, Dr. Daniel Longaker, Dr. Clara Marshall, Dr. Henry Beates, Dr. Henry Leffmann.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by WILLIAM PEPPER, M.D.; assisted by LOUIS STARR, M.D. Vol. I.—PATHOLOGY AND GENERAL DISEASES. Philadelphia, Lea, Brothers & Co., 1885. For sale by subscription only. 8vo. Cloth, $5.00; leather, $6.00; half Russia, $7.00.

It is with pleasure that we notice the appearance of the first volume of "A System of Practical Medicine by American Authors," under the able editorship of the distinguished Professor of Theory and Practice and of Clinical Medicine in the University of Pennsylvania. The selection of authors has been judiciously restricted to American physicians of acknowledged ability, not ignoring the importance of the study of special subjects by European investigators, to which full justice is done and of which due acknowledgment is made, but because it was felt that a proper time had arrived for the presentation of the whole field of medicine as it is actually taught and practised by its best representatives in this country. The publication of a work of such character and aim deserves especial notice by the profession, and it may almost be said to mark an epoch in American medicine. In reply to the query, Who reads an American book? we may answer, "Everybody, but particularly Americans."

The design of the work is comprehensive: it will be completed in five volumes, discussing the usual topics of internal medicine, including gynæcology and other special departments, containing about eleven hundred pages each, with illustrations. The next two volumes will appear at intervals of about four months.

The volume before us contains the following articles:

General Morbid Processes, by Reginald H. Fitz, M.D.; *General Etiology*, *Medical Diagnosis, and Prognosis*, by Henry Hartshorne, M.D., LL.D.; *Hygiene*, by John S. Billings, A.M., M.D., LL.D. (Edin.); *Drainage and Sewerage in their Hygienic Relations*, by Geo. E. Waring, Jr., M. Inst. C. E.; *Simple Continued Fever*, *Typhoid Fever*, *Typhus Fever*, by James H. Hutchinson, M.D.; *Relapsing Fever*, by William Pepper, M.D., LL.D.; *Variola*, by James Nevins Hyde, M.D.; *Vaccinia*, by Frank P. Foster, M.D.; *Varicella*, by James Nevins Hyde, M.D.; *Scarlet Fever*, by J. Lewis Smith, M.D.; *Rubeola*, *Rotheln*, by W. A. Hardaway, A.M., M.D.; *Malarial Fevers*, by Samuel M. Bemiss, M.D.; *Parotitis*, by John M. Keating, M.D.; *Erysipelas*, by James Nevins Hyde, M.D.; *Yellow Fever*, by Samuel M. Bemiss, M.D.; *Diphtheria*, by Abraham Jacobi, M.D.; *Cholera*, by Alfred Stillé, M.D., LL.D.; *Plague*, by James C. Wilson, A.M., M.D.; *Leprosy*, by James C. White, M.D.; *Epidemic Cerebro-Spinal Meningitis*, by A. Stillé, M.D., LL.D.; *Pertussis*, by John M. Keating, M.D.; *Influenza*, by James C. Wilson, A.M., M.D.; *Dengue*, by H. D. Schmidt, M.D.; *Rabies and Hydrophobia*, *Glanders and Farcy*, *Anthrax* (*Malignant Pustule*), by James Law, F.R.C.V.S.; *Pyæmia and Septicæmia*, by B. A. Watson, A.M., M.D.; *Puerperal Fever*, by William T. Lusk, M.D.; and *Beriberi*, by Duane B. Simmons, M.D.

After a careful examination of its pages, it may be said, as a criticism upon the work, that it has been ably conceived, and thus far has been admirably executed; it is also worthy of note that the press-work and binding are exceptionally good, and in keeping with the high character of the contents. Everywhere through its pages are found references to current medical literature, both indigenous and foreign, showing that the authors are fully abreast of modern progress, and have contributed to make this System truly representative not so much of American medicine as it is of modern medical science as understood and taught by American authors.

THE STORY OF MY LIFE. By J. MARION SIMS, M.D., LL.D. Edited by his Son, H. MARION SIMS, M.D. New York, D. Appleton & Co., 1884. 12mo, cloth, pp. 471. $1.50.

Autobiographies usually tell both too little and too much; they tell too little of what we desire to know of the man himself, and communicate some things that we do not care to hear. This charge can be made with less truth about this volume than about most of such publications. In a simple, unaffected style the eminent author lays before us an account of his early difficulties, his school-days, his courtship, his struggles with adversity and ill health, his discoveries, and, finally, his crowning success in life,—the organization of the Woman's Hospital, New York, which remains a perpetual monument to his skill, his energy, and his industry. The career of Marion Sims, told in graceful language which at times is pathetic, shows how a great mind, —though hampered by obscurity of birth, a delicate physical frame, frequent sickness, adversity and misfortune,—conquering every obstacle, can finally rise superior to them all. He attributes all his after-achievements to his early principles of honesty, industry, and a determination to succeed. This, with directness of purpose and an untiring sleuth-hound sort of persistency in following an idea to its logical and practical conclusion, enabled him to develop step by step as his life-work gradually opened before him, until he became, in his department of surgery, the leading man of his day. The references to his relations with contemporaneous physicians of New York, England, and France are not the least interesting part of the book.

Dr. Sims was a warm-hearted man, who feared God and loved his family and was true to his friends. His letters to his wife contained in the Appendix reveal his tenderness and his regard for her and their children in a very touching manner; but it seems like prying into the private correspondence of a friend, and almost makes one feel, in reading them, as if doing a mean or dishonorable thing. Among the last words which he wrote were those in which he ascribed his happiness, not to his successful career as a surgeon, but to his congenial home-life. After describing the great unhappiness of Trousseau, due to the conduct of his family, he declares, "We are happy in this life as our children choose to make us. The joys, amenities, and pleasures of home, with health, make life worth living. But these must abound and be enjoyed by all who come in contact with us. We must not only be happy in our own homes, but must do all the good we can outside of these, and try to make others happy too."

This life-story, we hope, will be read and enjoyed by our readers for themselves. It is full of encouragement and healthy stimulus to increased activity in professional work, and indicates the way to true success in life.

GLEANINGS FROM EXCHANGES.

DR. KOCH AND HIS CRITICS.—Dr. Koch has published a reply to some of the objections which have been raised by his statement that he has "discovered the cause of cholera" in the so-called "comma-bacillus." Dr. Koch endeavors to deal with the objections of those who point to the fact that he is false to the principles laid down by himself, in

so many words, at an earlier period of his career as a bacteriologist. Dr. Koch *formerly* stated (and all men of a scientific habit of mind must agree with that statement) that no micro-organism could be justly declared to be the cause of a disease until the organism had been "purely cultivated" and the disease had been produced by the inoculation of a healthy animal with this "pure culture." Dr. Koch *now* calls those persons who hold this reasonable doctrine "sceptics," and in a somewhat flippant manner states that he hopes to convince them by experiments which he is *now* (too late!) conducting similar to those of Professors Reitsch and Nikati.

It is too late for Dr. Koch to convince any true scientific sceptic. The man who has rashly committed himself to such public assertions with regard to the cause of a phenomenon cannot be subsequently accepted as a witness in his own favor. As soon as Dr. Koch publicly declared on insufficient data that he had discovered the comma-bacillus as the cause of cholera, and without any reserve insisted on using his authority and position to force upon the public a mere hypothesis as though it were a demonstrated or even a highly probable conclusion, then and there Dr. Koch put himself out of court as a witness of new facts in support of his contention. Others may produce the record of experiments in order to establish Dr. Koch's hypothesis, but he himself is so terribly involved in the issue that we cannot accept his judgment on such delicate experiments as those which he now is anxious to quote in favor of his view. *Vestigia nulla retrorsum!*

In reply to Dr. T. R. Lewis, Dr. Koch apparently wishes us to believe that he knew all along of the common occurrence of "comma-bacilli" in the mouths of healthy human beings. It is difficult to believe that Dr. Koch would not previously have mentioned these normal comma-bacilli and have pointed out how they differ (if they do differ) from the cholera comma-bacilli had he been acquainted with them. Dr. Koch states that the normal comma-bacilli of the mouth differ from those of cholera in regard to the conditions favorable to their artificial cultivation. *When* did he discover this? He reproaches Dr. Lewis with not having made such artificial cultivations. *When* did Dr. Koch make such cultivations of the comma-bacilli of the mouth himself? Surely it was *his* business to show that the hypothetical cholera comma-bacillus was distinct from the closely similar comma-bacillus of the mouth. Yet we find no allusion whatever to the comma-bacilli of the mouth in Dr. Koch's reports or in the address to the Special Medical Congress in Berlin. Either Dr. Koch did not know of the existence of the comma-bacilli of the mouth or he suppressed all mention of them when he endeavored to obtain credence for his extraordinary assumption that a comma-bacillus is the cause of cholera.

There will be no difficulty in producing experiments *now* which will seem to prove that the cholera-comma and the normal mouth-comma behave differently. It will not be difficult to produce symptoms like those of cholera by injecting cholera-commas into guinea-pigs or rabbits. This kind of experiment is so delicate that it may easily be allowed to take a course favorable to the views of a prejudiced experimenter. That is the pity of it. Dr. Koch has sacrificed for a momentary notoriety the irrecoverable position of a trusted scientific observer. He *must* be for the future (he has so willed it) a prejudiced experimenter. He has the fearful responsibility on his shoulders of his premature claim to a "discovery," of his unfortunate attempt to force his shadowy hypothesis of the comma-bacillus upon Europe as a solid result of scientific method, and this must render all his work on this subject for the future rightly liable to suspicion and doubt. Though we may credit him with perfect sincerity, we can never regard him as otherwise than hopelessly biassed.—*Medical Times and Gazette.*

A Central Tumor causes Jacksonian Epilepsy.—Dr. William Osler, of the University of Pennsylvania, records in the January issue of *The American Journal of the Medical Sciences* the history of an instructive case of Jacksonian epilepsy, the main points of difference between which and true epilepsy are the slow onset, local in character, beginning in (or in mild attacks confined to) one limb or a single group of muscles; the gradual extension until the side is involved, or in severe attacks the entire body; loss of consciousness late, not early and sudden as in true epilepsy; and, lastly, the muscular contractions are clonic.

His case lasted over fourteen years, the convulsions beginning in the left hand, at first monobrachial, then extending to the leg, afterwards becoming unilateral, and finally general; at first without loss of consciousness. For the first nine years of the illness there were remarkable intermissions, lasting for six or seven months, once an entire year. Six years after the onset the leg got weak and stiff. For four years, the tenth, eleventh, twelfth, and thirteenth of the illness, the seizures were frequent. During this period there were six weeks of unconsciousness, in which the spasms were very frequent, from fifty to eighty in the day. Ten months prior to the final attacks there was freedom from convulsions. The intellectual faculties were unimpaired.

The case was unusual in the limitation of the lesion to the ascending frontal convolution and to its fasciculus of white matter, scarcely involving the gray substance, which is com-

monly affected in cortical epilepsy. The accurate localization and the remarkable absence of tissue-changes in the immediate vicinity give the case the nature of an exact physiological experiment. With this limited lesion of the motor area there was permanent paralysis with contracture of one extremity and epileptiform convulsions. Another feature of interest in the case is the light it throws on the situation of the leg-centre. The fibrous mass was situated entirely within the anterior part of the paracentral lobule, limited in extent, confined chiefly to the medullary fibres of the superior frontal fasciculus, and only touched the gray matter in places. A point to be referred to is the absence of the paralysis of the leg for the first six years; for if the convulsions and monoplegia were caused by the same lesion, how explain the late onset of the latter? From the fibroid state of the tumor it might reasonably be inferred that it was originally larger and had shrunk; but the absence of puckering on the surface, and the way in which the margins merged with the contiguous parts, make it probable that the growth was always small, so small in fact that at one period of its development it may have caused sufficient irritation to induce the convulsions, and yet at the same time not involve the special fasciculi of white fibres to the extent of producing weakness of the leg, or monoplegia.

The Relation between Sick Headache and Astigmatism.—Mr. H. Bendelack Hewetson read a paper on this subject at the Leeds and West Riding Medico-Chirurgical Society, and showed six cases, as well as related the notes of several others, in which patients of ages from 12 to 36 had been for many years the victims of periodic attacks of migraine. Between the attacks of migraine there had been chronic dyspepsia and vertigo in walking in several of the cases. Two could bring on an attack of vomiting by sewing. All had some form of astigmatism, either mixed or compound, hypermetropic or myopic. All were completely cured by wearing proper correcting cylinders constantly. Mr. Hewetson believed that, when astigmatism of an abnormal character (or in some rare cases even a simple state of hypermetropia) existed in a neurotic subject, it might be the entire cause of periodic sick headache, with its accompanying dyspepsia, and could be cured by suitable glasses constantly worn. Mr. Hewetson related Dr. Lauder Brunton's experience on this subject, but thought that the chief agent in producing this neurosis was the astigmatic element in the visual defect in most cases which had come under his notice; and it evidently had little relation to the amount of an optical defect, unless that defect were complicated by astigmatism. Astigmatism in one eye, or eyes of varying degrees of optical error, would cause the same condition in neurotic subjects.—*British Medical Journal.*

Physicians on School Boards.—At the meeting of the Vienna Public Medicine Society, Dr. Baginsky, a well-known writer on school hygiene, drew attention to the advisability of medical inspection of schools. His conclusions were as follows: that, notwithstanding the improved hygienic condition of schools, the infantile organism is still subjected to injurious influences depending on school-attendance; that improvement is for this reason not one to be intrusted to architects and pedagogues, but to be carried on on a physiological basis; that it is therefore fitting that the decision as to improvements, both as regards buildings and systems of teaching, should be submitted to the physician; that every school committee should have a physician among its members; that the activity of every school committee as a whole, and of the medical member in particular, should be continuous; that periodic revisions do not fulfil the desired aim; that absolute independent power of deciding should be permitted to no member of such a committee, either as regards changes in the form of the school or in the studies,—not even to the medical member; that any practising physician should be able to become a member of a school committee when he by examination could show his fitness for the office. The passing of the "Physikatsexamen" (a special examination for medical officers of health) would be proof of such fitness.—*Med. Press.*

Repair of Tendons after Destruction.—At a recent meeting of the Berlin Medical Society, Dr. Gluck reported on a patient whom he had shown to the Society in February, in whom the tendons of the extensor communis digitorum and the extensor indicis had been destroyed in consequence of a phlegmonous affection at the back of the hand. Dr. Gluck replaced the tendons by a plait of catgut fibres, extending from the metacarpo-phalangeal articulation to the transverse dorsal carpal ligament. The operation had succeeded perfectly, the functions of the missing tendons being now completely performed, ten months after. He also showed another patient, aged 76, on whom he had performed the same operation rather less extensively, but with equally good results. He believes that the irritation of function exerts a regenerative influence on the catgut, so that, instead of being absorbed, it becomes organized. He has tried a similar experiment with divided nerves, by stitching one extremity to each end of a decalcified bone drainage-tube, with the result that they have become united. This method has been recommended also by Dr. Vendoit, of Liège, and called by him "névrotisation du tube osseux." Dr. Gluck strongly recommends both operations.—*British Medical Journal.*

CHOLERA-PRECAUTIONS.—The dread of cholera, and the obvious necessity of taking all possible precautions against its introduction and—more fearful still—against its spread, have opened the eyes of the Viennese to a number of sanitary defects in their midst. A writer in the *Allgemeine Wiener Med. Zeitung* draws attention to the want of proper closet-accommodation, and calls upon the Stadtphysikat and all other sanitary authorities to see that there is proper provision of closed closets in all houses, and especially in public places, hotels, coffee-houses, schools, railway-stations, theatres, and generally wherever people congregate. He complains, and with truth, that accommodation in this direction is insufficient, and that the condition of the discharge-pipes in even much-frequented hotels is a deplorable one,—offensive to the guests, and dangerous to the health of the inmates. Let us hope and *make sure* that all our own closet arrangements are perfect.—*Medical Press.*

DISPOSAL OF REFUSE IN VIENNA.—One of the most important innovations during the year is the new method that has been adopted in Vienna of collecting and removing town refuse. In place of doing this in open carts as heretofore, and as, alas! is the custom in many English towns, each household is supplied with a barrel with a close-fitting lid. When this is filled, the lid is well fastened on, the barrel placed on the cart and removed to the place appointed, without the possibility of any household dust and filth, impregnated with disease-germs, being blown about, and possibly disseminating disease along the line of route. One would think that all sanitary authorities would at once take the hint and do likewise; but the ways of sanitary authorities are not our ways, nor their thoughts our thoughts.—*Medical Press.*

MISCELLANY.

ANNUAL REPORT OF THE NATIONAL BOARD OF HEALTH.—The report of the Board was presented to Congress February 2. It especially considered the history of Asiatic cholera in this country, and urged the importance of making investigations into the nature of the disease, its mode of communication, methods of introduction, and its clinical history. An appropriation of forty-three thousand dollars was asked for to carry on this work by the National Board, and it was further recommended that half a million dollars be appropriated to assist State and local boards in preventing the introduction and the spread of infectious diseases.

THE HEALTH OF CINCINNATI.—We are indebted to the health-officer of Cincinnati, Mr. C. W. Rowland, for the following figures, which controvert statements which have appeared in our pages and elsewhere as to the bad sanitary condition of the city and the unusual prevalence of epidemic disease. It is positively declared that the sanitary condition of Cincinnati was never better than it has been this winter, and scarlatina and diphtheria have not prevailed epidemically. During November, 1884, the total number of deaths from the former was only ten, and from the latter only six, and both diseases were distributed as to locality. Total deaths from diphtheria in 1884 were seventy-two, from scarlatina sixty-four. The following will give the mortality for the preceding years:

	Diphtheria.	Scarlatina.
1883	78	201
1882	118	336
1881	105	60
1880	103	134
1879	152	546
1878	156	435

These records are open to the public. They show, contrary to the general belief, that the health of the city was unusually good last year, notwithstanding recognized sanitary defects. The total number of deaths in 1884 was 5667; in 1883, 5916; in 1882, 6873; and in 1881, 6101.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 18, 1885, *TO JANUARY* 31, 1885.

PROMOTIONS.

LIEUTENANT-COLONEL JOHN E. SUMMERS, SURGEON.—To be Surgeon, with rank of Colonel. January 9, 1885.

MAJOR JOS. R. SMITH, SURGEON.—To be Surgeon, with rank of Lieutenant-Colonel. January 9, 1885.

CAPTAIN EGON A. KOERPER, ASSISTANT-SURGEON.—To be Surgeon, with rank of Major. January 9, 1885.

APPOINTMENT.

HENRY I. RAYMOND.—To be Assistant-Surgeon, with rank of First-Lieutenant. January 12, 1885.

WEBSTER, WARREN, MAJOR AND SURGEON.—Granted leave of absence for one year, on surgeon's certificate of disability. S. O. 20, A. G. O., January 24, 1885.

TREMAINE, W. S., MAJOR AND SURGEON.—Granted leave of absence for one year, on surgeon's certificate of disability. S. O. 14, A. G. O., January 17, 1885.

MAUS, LOUIS M., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for two months, on surgeon's certificate of disability, with permission to leave the Division of the Missouri. S. O. 16, A. G. O., January 20, 1885.

TAYLOR, B. D., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect between March 15 and April 1, 1885, with permission to leave Department limits. S. O. 10, Department of Texas, January 26, 1885.

STEPHENSON, WM., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Fort Omaha, Neb., and ordered to Fort Niobrara, Neb., for duty. S. O. 6, Department of the Platte, January 19, 1885.

KEAN, J. R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Ordered for duty in Department of Missouri. S. O. 23, A. G. O., January 28, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 21, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE ON EMPHYSEMA AND EMPYEMA.

BY FRANCIS DELAFIELD, M.D.,

Professor of Pathology and Practice of Medicine in the College of Physicians and Surgeons, New York.

EMPHYSEMA.

GENTLEMEN,—We have here a man 57 years of age, a painter by occupation, who tells us that he was perfectly well, and accustomed to work regularly at his trade, until last spring. At that time he began to have what he calls rheumatism, affecting especially the muscles of the back. At all events, he had pains affecting the muscles of the back, which have continued and become worse up to the present time. In spite of these pains, however, the man was able to work until about three months ago. He then began to have a cough, accompanied by mucous expectoration. The attacks of coughing are attended with some difficulty in breathing, but, except for the difficulty of breathing during the act of coughing, he says nothing about dyspnœa. He cannot go up-stairs very well, but he does not complain of bad breathing-power. He also has to sit up in bed at night, on account of pains in the back, but not because of trouble in respiration. He has lost some in flesh and strength, and during the three months this cough has existed he has been unable to work.

On examination, we find that he is somewhat emaciated, that his muscles are rather flabby. He is constantly coughing and clearing his throat, as if there were an excess of mucus in the larynx, trachea, and bronchi. On examination of the chest, we obtain the physical signs of emphysema and of bronchitis extending down into the smaller tubes. But you will notice that even after the exertion of taking off his clothing he is not breathing with any great effort. He breathes perfectly quietly, without any undue exertion of the muscles of respiration. His heart is apparently normal.

The diagnosis in this case is, of course, very simple. The man is suffering from emphysema and from chronic bronchitis. But the case is one which brings up very well indeed some points concerning emphysema and bronchitis which I think we are apt to forget.

In the first place, you will notice that, although this man is 57 years of age, yet he is quite positive that this is his first attack of bronchitis. He has not had attacks of bronchitis every winter for a number of years, as you would have thought probable, and which is very often true in patients of his age. According to his account, this winter is the first winter that he has suffered from bronchitis at all; he had always been able to work until three months ago, and has never been confined to bed. The bronchitis which he has now did not apparently begin as an acute attack; or, if it was acute at the commencement, it was unattended with fever. It would seem that it has been either subacute or chronic in character from the first.

Again, you will notice that at the present time the man has well-marked physical signs of emphysema, so well marked that the lesion must have been in existence for a considerable length of time,—much longer, probably, than three months. The ordinary descriptions of emphysema in the text-books, and the ordinary causes which are given for the production of the affection, are, I think, apt to mislead us as regards the real nature of the disease. We get too much in the way of looking at it as if it were a condition due to mechanical causes, as if the dilatation of the air-vesicles were the result of some mechanical interference with the function of respiration. We get in the habit, when we look at a patient suffering from emphysema, of thinking that he must have had a chronic bronchitis for a good while before he had emphysema, and that the emphysema was the result of the chronic bronchitis. We also have the old tradition handed down from one book to another, that persons who play on wind-instruments, or who forcibly exert the lungs in any way, are especially apt to have emphysema, the fact of the matter being that in most cases of emphysema which we see there has been no such cause of the disease at all. But they really present themselves as patients with chronic changes in the lungs occurring as a primary condition, and not as the result of

chronic bronchitis, nor as the result of excessive or forcible expiration or inspiration; not as the result of playing on wind-instruments, but as the result of chronic textural changes in the lungs which resemble very much the chronic textural changes in chronic Bright's disease or in cirrhosis of the liver. The change seems to be more analogous to chronic inflammation than to anything else. When a person is suffering from such changes within the lung, he may or may not develop bronchitis. He may never develop bronchitis; he may die of emphysematous lungs without having had bronchitis at any time. But he is much more likely, some time or other, to have bronchitis.

Still further, you will notice in this man that, although there is well-marked emphysema and bronchitis, yet there is no asthmatic breathing. This man, you would suppose, is in a very favorable way of developing asthmatic breathing, because he has not only emphysema, but he has also chronic bronchitis; yet he has not asthmatic breathing, nor has he any of that constant dyspnœa which we see in so many cases of emphysema. The man breathes imperfectly, it is true, but it does not trouble him; he makes no effort to overcome it. The muscles of respiration move less rather than more than in well persons.

In a man of his age, suffering from emphysema and bronchitis, one of the first things to which we give our attention is an examination of the urine, to learn whether there are any signs of changes in the kidneys. This man's urine contains no albumen, and is of normal specific gravity. If we should find albumen even in small quantity, or low specific gravity of the urine, or an increased amount of the fluid, we should suppose that the man had a chronic interstitial nephritis of the atrophic variety, for this is a very commonly associated condition of emphysema. If the patient do not present any evidence of kidney-trouble, the prognosis is a great deal better.

The next question in this man's case is, what is the best treatment for him? His disease is bad enough to have disabled him from work for three months, and the kind of treatment which he shall receive is a matter of a good deal of importance to him. The man's circumstances are such that it would be impossible for him to go to another climate, and we shall have to do the best we can for him while he remains here. In the first place, it would be a very good thing for him indeed if he could go into a hospital, for this reason: inasmuch as he cannot go away to a different climate, it would be a great deal better for him to stay in the house all the time, not to go out of doors at all; and, that being true, it would be a great deal better for him to remain in a large building, like a hospital, with large rooms, than to remain in a small building with small rooms.

In the second place, we should have to give him certain drugs. He says he has been taking a variety of patent medicines, concerning the nature of which I am ignorant. I should be disposed to begin the treatment with the ordinary mixture of belladonna, ipecac, Dover's powder, and quinine. I should give him the following pill, which I am much in the habit of prescribing:

℞ Ext. belladon., gr. $\frac{1}{40}$;
Pulv. ipecac. comp., gr. $\frac{1}{10}$;
Pulv. ipecac., gr. $\frac{1}{10}$;
Quininæ sulphat., gr. $\frac{1}{2}$. M.

He would take one small pill of this kind every two hours during the day, and through the night when he woke. He might continue to take them for a week. I should expect that at the end of that time his cough would be better, that the expectoration of mucus would be diminished in amount, that his appetite would come back, and he would feel stronger. If this were true, at the end of the week I should give up the use of this remedy altogether, and give the patient one of the mineral acids, very likely combining it with the iodide of potassium, so that he should take, for example, five grains of the iodide of potassium and ten or fifteen drops of dilute nitric acid, with water and glycerin, or with some syrup, three or four times a day, for a considerable length of time.

EMPYEMA.

Some of you will remember having seen this young man once before, although it is a considerable length of time since he was here. He says it was the 10th of October, 1883, that he first came here. He was then suffering from well-marked empyema affecting the left side of the chest. He was sent to Roosevelt Hospital, and there

operated upon for empyema by making two openings into the chest-cavity, one behind and the other in front, passing a drainage-tube through from one opening to the other. After the chest was treated in this way he improved, and finally left the hospital apparently entirely well. His stay in the hospital was from October, 1883, to February, 1884. He remained well until about six weeks ago, when he began to have trouble again; his breathing began to grow short, and his side to pain him. He says a sort of boil formed at the seat of the former opening, and when it was opened he again began to breathe more easily.

The boy, as you see, is not emaciated. The two sides of the chest anteriorly are nearly symmetrical. As he breathes, however, you will observe that the right side moves more markedly than the left, although the latter does move in some degree. You observe where the so-called boil was opened. The resonance is good under the clavicle on both sides of the chest, but on the left as we descend it assumes a tympanitic character, and finally becomes flat. The breathing is normal over the right side of the chest in front. The heart is beating too rapidly, but it is nearly in its normal position, and there are no abnormal sounds. When he was still suffering from empyema the heart was pushed to the right, and the anterior opening which was made in the location which you observe gave no trouble; but as the boy began to grow better, and the heart to resume its normal position, it came in such close proximity to the drainage-tube at the anterior opening that more or less trouble was experienced.

From a posterior view the right side of the chest appears to be considerably larger than the left, and there is a slight curvature of the spine towards the retracted side. Here we observe two scars, one of which was the result of the posterior opening into the chest, and the other, which is lower, arose from an accident which sometimes occurs during this operation. The opening into the pleural cavity was made by degrees, and when the cavity was reached air and pus escaped forcibly, the air having reached the pleural cavity through a perforation by the pus into the lung. Some of the pus and air, instead of escaping directly outward through the opening, infiltrated between the planes of the muscles, and in this way the skin for some little distance became raised from the underlying tissue. The result of this was that for seven weeks there was considerable suppurative inflammation of the connective tissue, which gave no small amount of trouble. The second opening which you see was made to give exit to the pent-up pus between the skin and tissues beneath.

The resonance over the right side of the chest behind is exaggerated, while over the left side there is flatness below and absent respiratory sounds, but above the breathing is fairly good.

What happened in this boy's case is, that after the pus within the pleural cavity had escaped and ceased to form anew, the artificial openings healed up, the heart returned to its normal position, the boy gained in flesh and strength, and the lung expanded to a very considerable degree. But here the reparative process came to a stand-still. The lower lobe of the left lung did not expand, but has remained contracted, non-aerated. The extensive pleuritic adhesions and thickening caused retraction of the chest-walls. If the boy's condition had continued as it was up to six weeks ago, we should have regarded the case as giving a very satisfactory result after the treatment of empyema; but six weeks ago he began to have a suppurative inflammation in the left side of the chest below. It was not a recurrence of the empyema, properly speaking, because there remained no pleural cavity within which pus could form. At that locality there is nothing but collapsed lung, a mass of thickened pleura, and new connective tissue, and it is in this new tissue that the suppurative process has taken place.

What is to be done for the boy evidently is, to treat the local suppuration as we would treat a local suppuration or fistulous tract in any other part of the body. In the first place, the external opening must be made sufficiently large to allow the pus to escape freely, so that it will not accumulate and burrow in different directions. Then the tract of the sinus should be injected with such stimulating substances as would change the character of the tissue lining the suppurative tract and give rise to a granulation-tissue which would cause it to fill up. To enlarge the opening I should be disposed, first, to simply dilate it by means of a sponge or

laminaria tent, rather than proceed at once to make any incision with the knife. I should then explore the tract with the sound, to see how deep it was and to where it leads, and afterwards make the stimulating injections.

There is one feature in the case which I was unwilling to speak about while the boy was present; that is, the urine now contains a little albumen. When he was under treatment before, the urine was normal. A little albumen in the urine in a boy with such a history points very strongly indeed towards the formation of chronic diffuse nephritis, in which there is waxy infiltration of the Malpighian tufts.

ORIGINAL COMMUNICATIONS.

SPASMODIC TABES DORSALIS.*

Read before the Philadelphia County Medical Society, January 28, 1885,

BY JOHN M. KEATING, M.D.

AN interesting article appears in the *Revue mensuelle des Maladies de l'Enfance*, December, 1884, by Dr. d'Heilly, on "Spasmodic Tabes Dorsalis," relating three cases, from which we gather the following valuable points by literal translation:

About 1875, Prof. Charcot separated from the group of chronic myelitis an affection described as *spasmodic* tabes dorsalis, which was about the same time written upon by Erb under the name of spastic paralysis. It is a chronic affection characterized by slow and gradual progression, without doubt of spinal origin, with a paresis of the lower extremities, muscular contraction, and with spasmodic tremors either occurring when the limbs are touched or movements attempted, or else spontaneously. There is also increased tendon reflex.

It is most frequent in adults, but Erb, Seeligmuller (*Progrès Médical*, 1876), d'Espine, and Picot have recorded a number of cases in children. In these cases motion alone is affected; sensibility remains throughout normal. The disease may begin early,—at eight months in one case of the three reported, at two and one-half years in another. Ordinarily it is first found out by the mother, who finds difficulty in flexing the knees or in separating the legs. In well-marked cases the legs are stiffened as the child lies in bed from time to time, especially the feet, which are also turned in (equino-varus). There is contraction of the adductors and extensors of the thighs. At times the rigidity becomes marked; often the knees are held in slight flexion, and it requires some force to move them. On exciting this, the limbs are thrown into a tremor, which may be limited to the feet or may extend to the muscles of the trunk,—in fact, to the whole body. If the child be placed upon its feet by grasping it by the body or arms, the thighs, which are flexed upon the pelvis more or less, will be adducted, the knees touching, the feet will assume a position of forced extension. In attempting to walk, the feet will drag along the ground, stumble over the least obstacle, and constantly interfere with each other. None of the children reported could walk absolutely alone: one could walk a few steps when supported by an object upon which it rested the weight of the body by the arms; the gait was shuffling. The epileptiform tremor of the muscles is at first provoked by standing, and this greatly hinders the walking. In three cases reported, the upper extremities were not involved. This is not absolutely the rule in all cases, but, when the arms are involved, this follows the trouble in the lower limbs, usually at a long interval. In such cases there is a paresis of the muscles without involuntary flexion of the fingers at first, which is intermittent in character and then permanent. The wrist becomes rigid in extension and pronation, so also the elbow, and the arm is hugged to the thorax.

With rigidity comes exaggerated tendon reflex, which according to Charcot precedes contraction, and which persists throughout its course and succeeds it. It is usually very marked in the knees, less so in the feet, and in children is less so than in adults. The symptoms remain confined to the motor tract throughout the disease; the usual symptoms, due to disturbance of sensation, which accompany the different forms of myelitis are absent. There is no rachialgia, no feeling of constriction, no pain; neither are there sensations of cold, nor formications, nor fugitive pains, which, if they existed, would soon be made known by children.

* I would suggest a better name in "Symptomatic Spastic Muscular Contracture."

Cutaneous and deep sensibility are normal; there is neither hyperæsthesia nor anæsthesia. In one of the cases observed there was some well-marked anæsthesia of the lower extremities, but the case was a doubtful one. Sometimes, according to Westphal and Berger, interstitial myelitis may extend itself, involving the posterior tract, and then the symptoms of ataxia complicate the spasmodic contraction. The functions of the sphincters are normal; there is neither retention of urine nor incontinence, which is remarkable for children with disease of the cord.

The muscles of the thigh are not atrophied, and electro-contractility is normal. In one of the cases reported nutrition was excellent, in the other two it was somewhat below par, but this was accounted for by the prolonged enforced rest in bed. The duration of the disease is not limited; complete cure is rare. The symptoms persist indefinitely, despite treatment, without much improvement: if they do become aggravated, the disease is even of itself directly fatal. In children the zymotic diseases, and most frequently tubercular disease, make a fatal termination. It is to be regarded as an infirmity rather than a disease, as it will not of itself prevent the patient reaching adult life. We have written of the affection only in its bearing upon children. In adults it is most common at the age between thirty and fifty, and slightly more frequent in males than in females. The cause is unknown; possibly prolonged exposure to damp cold is the most frequent; in children possibly blows, a fall, or exposure. There is a congenital form, which possibly results from an arrest of or from irregular development in the motor tract, or is traumatic from instrumental or difficult labor. Little records a case such as this, and attributes it to spinal congestion due to asphyxia. Possibly inheritance has its influence. In the case narrated below, the other twin was born with arrested cranial development and lived but a few moments.

The following case serves as an example:

Louis, aged 5 years, entered the hospital (Trousseau) August 30, 1883. The child is a twin; its brother survived but a few moments. The father and mother are in good health; they are not affected with syphilis nor alcoholism. The mother has never miscarried. The child has never walked alone, but since three years old he could stand alone with the aid of a fixed support, and could take a few steps in that way. He began to talk at the age of eighteen months. The disease dates from his eighth month, at which time the mother noticed that she had difficulty in separating the legs of the child; they were straightened and stiffened at times, then became relaxed, and the conditions would again recur, either spontaneously or upon the slightest contact. The arms were in every way normal. About a month after, tremor was noticed when the child was lifted by the arms and held upright on the table. In the following month the contractions increased, and if forcibly overcome would return by themselves at once. Cold douches and faradization brought about some improvement; the permanent crossing of the limbs disappeared, and the intervals existing between the spasmodic contraction of the muscles lengthened.

The condition of the patient at present is as follows. The muscles of the lower extremities are in a state of contraction, the feet extended in equino-varus, and cannot be overcome without considerable force. There is no notable muscular atrophy. When the child is held upright the contraction increases, the inferior extremities are adducted, the feet in equino-varus resting on their metatarsal phalanges. The legs cross, and the foot in advance tends to place itself directly in front of the one supporting the body. The little patient can only take a few steps by supporting himself on his arms. At times the contraction subsides entirely and the limbs become flaccid, but if the limbs are touched, however lightly, or he makes the attempt at movement, the contraction returns. Patellar and plantar reflexes are exaggerated. Faradic contractility is normal. When supported erect, the two limbs take upon themselves epileptiform movements, which can be equally well provoked by seizing roughly the foot in advance. This tremor is more pronounced in the right limb. There has been no pain, either spontaneous or upon pressure. Sensation is normal. The intelligence is somewhat undeveloped. The expression is heavy. Speech normal. The cranium shows faulty development: it is not symmetrical; posteriorly it is flattened. The frontal fossæ, especially the left one, are very prominent. The right occipito-parietal region comes out in bold relief, and the left is correspondingly depressed.

The following typical case, reported by Dr. C. K. Mills in the *New York Medical Record*, September 6, 1879, presented in detail the marked features of the disease, and as I now have the patient under my care, and have been able to study his present condition in contrast to what it was in 1879, I can dwell more at length upon the prognosis.

B. D., æt. 4. Nothing known of the previous history. He has a fair-sized head, but it is flattened a little more than usual from the vertex forward. The fontanels are closed, but the lines of the sutures are projecting and rough. Both pupils are dilated, and according to the nurse they are always in that state. He has left internal strabismus. He has no facial paralysis; he can protrude the tongue without difficulty, and he talks pretty well. He seems to have fair intelligence, but he cries upon the least provocation. His back seems weak, and tends to project backwards as he sits in the chair. He has no spinal curvature. He has good use of his arms, but they show a tendency to flex at the elbows. They frequently get into a semi-flexed position when he is quiet, and sometimes resist extension slightly, but they are not rigid, and he can straighten them himself without special effort. He is unable to stand alone, and if attempts to force him are made he becomes much alarmed; if not held, he falls at once to the floor. Supported by the hand or from behind, he stands in a peculiar position. The legs from the knees upward are slightly drawn together, below the knees they are a little apart. His heels are kept slightly elevated. The thighs are bent on the pelvis at an angle of about 120°, and the legs have about the same inclination as the thighs. The feet turn slightly inward. The flexors and adductors of the thighs and the muscles of the calves feel hard and are in a condition of tonic spasm. He walks in a curious fashion, keeping hold of the hand of the nurse. His legs remain semi-flexed at the knees. He steps on the front part of his feet and toes, the heels never touching the floor. The thigh- and leg-muscles are fully developed, particularly the flexor group. Electro-contractility is generally well retained. Sensibility is good. The limbs are not cold nor changed in color. The joints are free from adhesions. The prepuce is not adherent, and can easily be retracted. When sitting or lying down, his legs can be straightened by the exercise of some force, but they immediately tend to return to their state of abnormal flexion and adduction. Slightly tapping each patella-tendon, the corresponding foot and leg are projected quickly and somewhat forcibly forward. I can produce the same phenomenon by tapping upon the lower part of the tibia. Abruptly forcing the foot into flexion and smartly striking the tendo Achillis, no tremor or oscillation is set up, but the spasm of the flexors and adductors is increased.

Dr. Mills concludes that the disease is one of the motor disorders of the cord of the lateral or antero-lateral columns, but should not be confounded with primary lateral sclerosis, also congenital.

Samuel Gee ("Billroth Hospital Reports," vol. xiii., 1877) writes of spastic paraplegia, and considers the disease as congenital or beginning in infancy. Dr. S. W. Mitchell is quoted by Dr. Mills as having spoken of cases of children with rigidity of the legs from defective cerebral development, and also of cases of spasms of the adductors of the thighs, in which he has had circumcision performed without benefit. Dr. Mills, in this lecture, quotes a case which he saw with Dr. Roland G. Curtin, of this city, where all the symptoms above recorded followed an attack of rheumatism complicated with endocarditis in a girl of 13. She had, in addition, severe pains or aching in the joints or limbs. Under nitrate of silver she rapidly improved, and in two weeks was well.

In the continuation of his interesting article, Dr. d'Heilly (*Revue des Maladies de l'Enfance*, January, 1885) discusses the question as to the cause and seat of this interesting symptom, quoting the researches of Richter and Berger in Germany as showing its dependence in many cases upon a primary sclerosis of the lateral columns. But, again, distinct cerebral symptoms, such as convulsions, in infancy have initiated the attack and the spastic paraplegia following, being in such cases a secondary phenomenon; and in connection with this he quotes Ross (*Spas. Paral. of Infancy, Brain*, October, 1882) as asserting that, although there may be a localized spinal lesion primary, the most usual condition is one of arrest of cerebral development, associated with a bilateral hemiplegia from congenital absence of certain centres; but should this latter explanation be correct, less marked cerebral symptoms should exist than are presented by the cases. Almost all the affections of the cord resulting from pressure or from sclerosis present more or less certain features which show an involvement of the lateral columns; in most of them there is pain or anæsthesia, vesical paralysis or paresis, muscular atrophy or inco-ordination of movement, and the tendency of most of them is to extension.

The ataxia of Friedrich presents many symptoms in accord with this disease. Sensation is normal. The bladder is unaffected, and there is no muscular atrophy. There is muscular inco-ordination and gradual involvement of the arms, and finally speech is affected. Frequent errors

are made in diagnosis in such cases. Even Charcot is reported by d'Heilly as recording a case of supposed spastic paralysis in which the existence of cerebro-spinal sclerosis "en plaques" was found post mortem.

As d'Heilly distinctly emphasizes the fact that "spasmodic tabes dorsalis" never presents any cerebral symptoms, those cases which are recognized as distinctly hemiplegic in character should be eliminated (see excellent paper by Dr. Sarah J. McNutt, *Archives of Pediatrics*, January, 1885), and also double infantile spastic hemiplegia (same author, *Am. Jour. Med. Sci.*, January, 1885). In the latter affection, which more than any other may possibly be confounded with the one in question, Dr. McNutt's exceedingly valuable paper gives us as symptoms "more or less complete hemiplegic motor inability, with contraction and defective development of both bones and muscles," "with or without aphasia, monosyllabic utterances, dysphagia, dyspnœa, and idiocy, the latter being especially characteristic of the double affection."

We have endeavored to epitomize this interesting communication, because we believe these cases to be overlooked in this country or misunderstood. The diagnosis is readily made in marked cases, especially in adults. Doubtless some will read this article and remember cases of their own which had puzzled them. Certainly in the cases referred to by Dr. d'Heilly there was a lesion of a more or less persistent character; but are there not functional derangements, prototypes of the more serious disease, whether disturbances in nutrition or in circulation, which can be influenced by treatment? Can we not have one form depending upon imperfect development of cerebral centres, and another, possibly a difference in degree only, affecting in the same way those of the cord? Cases of functional paraparesis in infancy, with spasmodic adduction, are certainly noted by all who see much of children's practice, and in such cases the muscular wasting, when it does occur, is secondary, owing to want of use.* In our own experience these congenital cases seem to be due to imperfect development, as the intellect shares this condition, though to such a slight extent as only to be noticeable by comparison: the child is said to be backward.

Functional contractions are not infrequent after acute diseases in infancy. A child of my own, at the age of 20 months, had spasmodic closure of the fingers and great rigidity of the wrists immediately following a mild attack of rötheln, which lasted several days (three or four). There was no pain, apparently, and none of the other muscles were affected. When playing, she lifted her toys with the back of her wrists. Nutrition was perfect, the functions normal. In this case relaxation would come on at times, but the slightest touch or effort on her own part would bring about violent contractions. There was relaxation during sleep. I noted this same condition following measles, in an infant, which involved the muscles of both arms and legs, the extensors of the legs and the flexors of the arms, with contraction of the toes and fingers. There was pneumonia in this case, and the temperature ran high. The little patient gradually improved; in fact, in both these cases the improvement was very gradual. Large doses of bromide of potassium, hot baths and friction, with tonics, were used in the first case, and in the latter quinine and poultices in addition. Possibly these cases may be called hysterical. The lesion is evidently an irritative one, but exactly why it should be limited to certain cord-centres and be painless is an interesting problem.

But in such cases as reported by Dr. d'Heilly, when changes have probably taken place of a definite character, and especially if they occur in children but a few months old, our only chance for treatment points to alteratives, tonics, and encouraging nutrition.

Like all other symptoms, contraction may represent in infancy and childhood, as well as in adults, simple irritation (hysterical, possibly), and every grade to advanced disease. I think chorea may be classed in this category also.

As for the treatment of well-marked cases of spasmodic contraction, there seems but little hope of doing good. The disease, whatever its lesion may be, is limited, is never fatal, and after reaching a stage about as advanced as the boy B. D., quoted from Dr. Mills's report, somewhat improves. This boy can now

* This I believe should not be confounded with the so-called idiopathic contracture of infancy, which is the result of irritation and is painful and acute in character.

take a few steps by himself before the muscular spasm upsets him; he is in excellent health, well nourished, muscles firm, and never complains. But in this case the lesion certainly seems to be a bilateral central one. If we are able to recognize the features of the disease of the spinal types in its incipiency, I believe much could be accomplished; and it is for this reason that I bring this matter before you this evening.

All causes of irritation should be removed. If they are males, possibly preputial adhesions are present: they should be broken up or circumcision performed. In my opinion the latter is a most important operation, not so much from the relief to the phimosis, which could be, in many cases, equally well accomplished by stretching (Willard), but owing to the direct results upon the nutrition of the spinal centres, which section of the peripheral terminations of the nerves in the prepuce may bring about, acting as will the actual cautery or blisters in other neuroses. In females I would give warm baths, alternating with cold sponging, especially to the spine, and full doses of bromide of potassium. In incipient cases the bromides are of great importance, with stimulating frictions to the spine, using either mustard poultices, or liniments of oil of amber or croton oil, or possibly dry-cupping. Fresh air and proper diet are, of course, understood; in the latter, milk should always form the principal part, and eggs also, in preference to animal-broths. As regards medication, I would insist upon an emulsion of cod-liver oil, either with liq. acid. phos. comp. (Pepper), or lacto-phosphate of lime. Arsenic is certainly of great value in these cases. As to quinia and strychnia, I feel doubtful as to their use, even in very small so-called tonic doses; for although the condition is possibly an evidence of anæmia, as are chorea and some mild forms of epilepsy, I would prefer to rely on food, iron, arsenic, and fresh air.

In more pronounced cases, when we have decided evidences of "spasmodic tabes dorsalis," and treatment has been of little avail, we might use the bichloride of mercury, in small and frequent doses ($\frac{1}{150}$ of a grain), three times daily; or, if we suspect sclerosis, the chloride of gold and sodium. But I think that the best results are obtained with the nitrate of silver; in it I would place most reliance. Erb is reported as having cured a case with the continued current. Charcot failed with electricity, hydropathy, and cauterization.

HYDROCHLORATE OF COCAINE IN PURPURA HÆMORRHAGICA.

BY WILLIAM F. WAUGH, A.M., M.D.,
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A LADY aged 27 years had had several profuse hemorrhages within a period of four months. Her color was still good; her health apparently unimpaired; but her blood had become deficient in coagulability, so that a slight prick on the finger occasioned hemorrhage which was only checked with difficulty.

She had no previous history of unusual hemorrhages. Her mother was subject to epistaxis which on more than one occasion necessitated the attendance of a physician, and at one time continued nearly a week.

Since the middle of December the lady had several premonitory symptoms. On the 18th of December, after unusual fatigue, she fainted. After this date several uterine hemorrhages occurred of small amount. On the 1st of January she complained of a sense of fulness in the head, as if her nose were about to bleed. That evening she took six grains of quinine. Later the same evening she felt something like a fragment of food between two of her teeth, and endeavored to remove it by drawing the edge of a handkerchief between them. At once the gums commenced to bleed from where the handkerchief had been used, and, later, from a number of other places. On the lips, tongue, inside of the cheeks, gums, and roof of the mouth appeared a number of purple spots from the size of a pin-head to that of a silver half-dime. A blue spot the size of a half-dollar appeared on the right thigh, and another on the right shoulder. On the face, neck, chest, and limbs, the spots were smaller and bright red. Slight discharges of blood took place from the womb. The stools were tarry. The face was pale, the skin cool, the pulse weak and compressible. She complained of alternating flushes and chills, and of vertigo whenever she attempted to rise from the recumbent posture. The elbows and knees ached as if they had been bruised.

From this time until the evening of the

3d, I was engaged in trying the various styptics to check the blood which oozed from the gums. Alum, tannin, phénol, phytolacca, and Monsel's solution were used with no appreciable effect. The only local remedy which checked the hemorrhage was ice; and of this the effect was but momentary. Internally, phytolacca, ergot, digitalis, and hydrochloric acid were given. After forty hours the hemorrhage was still increasing.

In this predicament I remembered having read in one of the recent reports upon hydrochlorate of cocaine, that after its use there was less hemorrhage than in operations conducted without it.

I procured a little of a four-per-cent. solution of the drug, and applied it twice to the bleeding gums, and to a spot on the under lip where the blood was just beginning to gush out. The next time I saw my patient, in about three hours, I found the hemorrhage had entirely ceased, except at one point. Here the gum was covered with a clot of blood. I removed this and applied the cocaine solution directly to the bleeding surface, and in five minutes the hemorrhage ceased, and did not return.

On January 5, I removed an eye-tooth, with a very long root, from the mouth of a lady in her eightieth year. She dreaded the operation greatly, as she had had serious hemorrhage from the same cause not long before. When the tooth was extracted the blood began to flow freely; but simply pressing a bit of cotton saturated with cocaine solution into the cavity stopped the hemorrhage at once.

A few days later a lady came to me with a simple inflammatory swelling of the upper lip. I applied the cocaine solution, but in spite of it the inflammation went on to suppuration. This but seldom happens when such cases are treated with continuous applications of hot-water cloths. From these cases I would infer that cocaine has valuable powers in checking capillary hemorrhage of a passive kind, but none whatever in controlling crescent inflammation.

Its physiological action, as determined by applying the solution to the web of a frog's foot, is to cause contraction of the blood-vessels, followed by dilatation. This secondary dilatation, however, did not occur in the case of purpura.

I wish to add one more to the uses of this drug as a local anæsthetic. The removal of hairs from the lips and chins of ladies, by electrolysis, is in some cases exceedingly painful. To many the operation is practically painless. Others bear the pain with patience for the sake of getting rid of the ugly deformity. But to anæmic, highly neuralgic persons the pain is sufficient to deter them from the operation. In several cases of this kind I have found that applications of the four-per-cent. solution to the skin, repeated every ten minutes, render the process absolutely free from pain.

1521 Arch Street, January 20, 1885.

STATISTICS OF NEPHRECTOMY.

BY CHARLES BAUM, M.D.

VERY general interest has recently been aroused by the surgical operations upon the kidney. Among these, incision into a kidney, or *nephrotomy*, can probably claim the greatest antiquity, being mentioned by the early writers on medicine. The removal of a calculus from a kidney by enlarging an existing sinus is also of ancient practice; but the operation of the removal of the renal calculus early in its formation and before the enclosing structures have become implicated was performed first by Henry Morris, of London, at so recent a date as 1880. As "floating kidney" has been observed in quite a number of persons, being more frequent in women, surgeons have attempted to remedy the difficulty permanently by suturing the organ to an incision in the parietes. This procedure, called *nephrorrhaphy*, promises well, the results thus far having been encouraging.

Vivisections have repeatedly and fully shown that animals can live after the extirpation of one kidney, and many examples of congenital absence of a kidney have also been found in the post-mortem room. Having these facts in mind, the late Gustav Simon, of Heidelberg, projected and successfully performed the first *intentional* extirpation of the entire kidney, or *nephrectomy*, operating by the lumbar incision. Since his successful case, many operations have been recorded, one hundred of which have been tabulated by Dr. Robert P. Harris in the *American Journal of the Medical Sciences* for July, 1882. The annexed table comprises seventy-two additional cases:

No.	Reference.	Date of Operation.	Operator.	Sex and Age.	Incision (A. Abdominal; L. Lumbar).	Diseased Condition.	Recovered; Died.	Cause of Death.
1	Western Lancet, 1882, p. 486, and Letter, Dec. 27, 1884....	1869	Lane.....	F., 35.....	A.	Floating kidney.....	D.	Peritonitis.
2	Brit. Med. Jr., 1882, ii. p. 929.	May 8, 1881	Tait.....	F., 24.....	L.	Variety of tumor not stated; three and a half months prior failed by abdominal section, as intestines were too matted.....	R.	
3	Deutsches Med. Wohnsch., Berl., 1882, xiii. p. 702.....	Mar. 20, 1882	Schede.....	F., 26.....	A.	Hydronephrotic sac.....	D.	Collapse.
4	Lancet (Lond.), 1882, ii. 567..	June 20, 1882	Elder.....	F., 36.....	L.	Scrofulous pyelitis; nephrotomy three weeks prior.....	R.	
5	Berlin. Klin. Wohnsch., 1882, xix. p. 745.....	July 1, 1882	Bruntzel.....	F., 33.....	A.	Fibroma of capsule and left kidney removed; weight, 37 pounds; intestine ruptured; exploratory incision.....	R.	
6	Brit. Med. Jr., 1882, ii. p. 100.	July 12, 1882	Heath.....	Child.....	...	Scrofulous kidney.....	D.	
7	Ibid., p. 1299.....	Aug. 10, 1882	Keeling.....	F., 23.....	A.	Cystic kidney; supposed ovarian.....	R.	
8	Liverp. Med.-Chir. Jr., July, 1883, p. 252.....	Sept. 2, 1882	Rawdon.....	F., 16 mos.	A.	Carcinoma with cysts; weight, sixteen and one-half ounces.....	D.	Collapse (carbolic spray as factor).
9	Phila. Medical Times, 1882-3, xiii., p. 67.....	Sept. 16, 1882	Goodell.....	F., 52.....	A.	Hydronephrosis.....	R.	
10	N. Y. Med. Jr., 1883, xxxvii. p. 171.....	Oct. 14, 1882	Wright.....	F., 34.....	A.	Chronic pyelitis and, possibly, calculus; stone weighed 135 grains	R.	
11	W. Lancet, 1882, pp. 433-481..	Oct. 14, 1882	De Vecchi.....	F., 33.....	A.	Pyonephrosis; weight, 11 ounces.....	R.	
12	N. Y. Med. Jr., 1883, xxxvii. p. 171.....	Nov. 2, 1882	Polk.....	F., 19.....	A.	Misplaced left kidney; absence of right kidney and ureter, also uterus and vagina.....	D.	In eleven days and one hour; convulsions and coma.
13	Med.-Chir. Tr., lxvi. p. 305, 1883.....	Dec. 13, 1882	Sir T. S. Wells	M., 38.....	A.	Soft cancer; six and one-half inches long, 4 inches wide.....	D.	Bloody urine; slight peritonitis.
14	Brit. Med. Jr., 1883, i. p. 1004	Dec. 22, 1882	Rawdon.....	M., 12.....	L.	Traumatic rupture of right kidney; lateral cystotomy in four days for cystitis caused by blood-clots.....	D.	Pyelitis and abscess in left kidney; decomposing clots and retention of urine.
15	Dublin Jr. Med. Sc., 1883, 3s., lxxv. p. 86.....	1882	O'Reilly.....	F., 26.....	L.	Primary tubercular kidney.....	D.	Collapse.
16	Lancet (Lond.), 1883, i. p. 423: from Gaz. degli Ospital., Feb. 18, 1883.....	Dec. 20, 1882	D'Antona.....	F., 26.....	L.	Pyonephrosis.....	R.	
17	Ibid	.....	Novaro.....	.....	...	.....	R.	
18	Md. Med. Jr., xi. p. 429; from Wien. Med. Woch., 1884, Nos. 23, 24, 25.....	Jan. 5, 1883	Billroth.....	F., 38.....	A.	Myxo-sarcoma; diagnosis of retro-peritoneal fibroma.....	R.	
19	Tr. Pathol. Soc. Lond., 1883, xxxiv. p. 141.....	Feb. 2, 1883	Thornton.....	F., 53.....	A.	Tumor of capsule; kidney healthy; diagnosed ovarian.....	R.	
20	Lancet (Lond.), 1883, i. pp. 424-548.....	Mar. 3, 1883	West.....	M., 15.....	L.	Traumatic rupture of left kidney; suppuration; nephrotomy, first; weight, 16 ounces.....	R.	
21	Md. Med. Jr., 1884, xi. p. 406	Mar. 3, 1883	Billroth.....	F., 40.....	L.	Urinary fistula after double ovariotomy; fetid pus.....	D.	Exhaustion.
22	Ibid., p. 426.....	1883	Billroth..	F., 28.....	A.	Supposed stenosis of pylorus; right normal kidney removed.....	D.	Retro peritoneal cellulitis, peritonitis, and pleurisy.
23	Brit. Med. Jr., 1883, i. p. 1226	Apr. 9, 1883	Whitehead.....	F., 45.....	A.	Abscess.....	D.	Shock.
24	Med. News (Phila.), 1883, xlii. p. 547.....	1883	Palmer.....	F., 19.....	A.	Pyonephrosis.....	D.	Peritonitis.
25	Ibid., p. 646.....	Apr. 20, 1883	Gross.....	F., 59.....	A.	Medullary cancer (partial choleocystectomy for calculus also); diagnosis uncertain.....	D.	Peritonitis and suppression of urine.
26	Brit. Med. Jr., 1883, ii. p 615	Apr. 20, 1883	Walter	F., 42.....	A.	Cystic tumor of floating kidney.....	R.	
27	New Eng. Med. Gaz. (Homœopathic), 1884, xix. p. 266 ..	Apr. 27, 1883	Boothby.....	F., 27.....	A.	Painful movable kidney (left)	R.	
28	Lancet (Lond.), 1883, i. pp 963, 1104.....	May 8, 1883	Israel.....	F., 21.....	L.	Pyonephrosis.....	D.	Acute tuberculosis.
29	Bull Acad. de Méd., Par., 1883, 2s., xii. p. 1077.....	June 9, 1883	Ollier.....	F., 22.....	L.	Pyelonephritis; nephrotomy six months prior.....	R.	
30	Ibid.....	1883	Ollier.....	Child, 4....	A.	Sarcoma.....	D.	Shortly from syncope.
31	Ibid.....	1883	Ollier	F.....	A.	Large cyst.....	D.	

32	Lancet (Lond.), 1884, i. p. 13..	June 19, 1883	Jowers.....	F., 55.....	A.	Scrofulous and cystic kidney.....	D.	Syncope on third day while retching.
33	Med. Times and Gaz., 1883, ii. p. 268	July 12, 1883	Kidd.....	F., 28.....	A.	Abscesses.....	D.	Collapse.
34	Med. Record (N. Y.), 1883, xxiv. p. 583.....	Aug. 1883	Wylie.....	F., 34.....	A.	Tuberculous and movable; diagnosed movable kidney.....	D.	
35	Brit Med. Jr., 1883, ii. p. 438	Aug. 11, 1883	May.....	F., 24.....	L.	Scrofulous kidney.....	D.	Suddenly; suppression of urine; other kidney diseased.
36	Lancet (Lond.), 1884, ii. p 778; Brit. Med. Jr., 1884, ii. p. 863	Aug. 1883	Godlee.....	M., 22 mos.	A.	Mixed sarcoma; weight, about 1 pound.....	R.	D ed of return six months later.
37–41	Lancet and Brit. Med. Jr	.....	Thornton.....	.....	5 A.	.....	5 R.	
42	Ibid.....	.....	Meredith.....	F., 4.....	A.	Round-celled sarcoma.....	D.	Vena cava inferior ligated; new growth in lungs.
43	Brit. Med. Jr., 1884, i. p. 758.	Nov. 13, 1883	Sir T. S. Wells	F.....	A.	One-third of left kidney removed with two solid circumrenal tumors; fibrolipomata; weight, 16½ and 14½ pounds; not diagnosed.....	R.	
44	Ibid., 1883, ii. p. 1031, and 1884, ii. p. 575.....	Nov. 13, 1883	Davy.....	M., 53.....	L.	Fibro cystic disease; 7 x 2½ inches; preceded by exploratory abdominal incision.....	R	Died two months later from encephaloid cancer of liver, bladder, and left ureter; calculus impacted in new growth.
45	Ibid., 1883, ii. p. 1031.....	Nov. 14, 1883	Thornton.....	F.....	A.	Tubercular disease.....	R.	
46	Bost. M. and S. Jr., 1884, cx. p. 73.....	Nov. 24, 1883	Homans	M., 29.....	A.	Cancer; weight, 3½ pounds.....	D.	Acute general peritonitis.
47	Brit. Med. Jr., 1884, ii. p. 1075	Oct. 24, 1883	Morris.....	M., 35.....	L.	Calculus; kidney harder and firmer than normal.....	R.	
48	Cincinnati Lancet and Clinic, 1883, n. s., ii. p. 571.....	Nov. 2, 1883	Dandridge.....	F., 22.....	A.	Probably strumous disease; thick, fatty contents.....	D.	Hemorrhage.
49	Brit. Med. Jr., 1884, ii. p. 123	Dec. 24, 1883	MacEwen.....	M., 11.....	L.	Calculus.....	R.	
50	Tr. Med.-Chir. Soc. Edin., iii., n. s., p. 35; Edin. Med. Jr., 1884, xxix. pt. 2, p. 896	1883	Duncan.....	F., 21.....	A	Pyonephrosis.....	D.	Abscess in stump of ureter opened into bowel; exhaustion.
51	Brit. Med. Jr., 1884, ii. p. 424	1883	Kosinski.....	.....	A.	Enlarged lipomatous kidney containing nine calculi.....	R.	
52	Ibid., 1884, i. p. 453.....	1884	Savage.....	.....	A.	Pyonephrosis.....	D.	
53	Ibid., p. 1262.....	1884	Boeckel.....	F., 40.....	A.	Urinary fistula after hysterectomy; died in seven months, of cancer of abdominal glands and parenchymatous nephritis.....	R.	
54	Md. Med. Jr., xi. p. 429; from Wien. Med. Woch., 1884, Nos. 23, 24, 25.....	Feb. 16, 1884	Billroth.....	M., 33.....	L.	Probably interstitial papilloma.....	R.	
55	Brit. Med. Jr., 1884, i. p. 1261	June 21, 1884	Bantock.....	F., 33.....	A.	Tuberculous kidney.....	...	
56	Med. and Surg. Reporter, li. p. 700.....	Oct. 26, 1884	McLean.....	F.....	A.	Pregnancy suspected; large cystic kidney, both ovaries, and part of great omentum removed.....	...	
57	Med. News (Phila), 1884, xlv. p. 707; N. Y. Med. Jr., Dec. 27, 1884.....	Nov. 3, 1884	Weir.....	F., 23.....	L.	Pyonephrosis.....	D.	Venous hemorrhage, shock.
58	Ibid. and letter.....	.....	Halsted.....	.....	A.	Carcinoma.....	D.	
59	Ibid.....	.....	Thomas.....	.....	A.	Fibroma.....	D.	Shock.
60	Ibid.....	.....	Thomas.....	.....	A.	Carcinoma.....	D.	Shock.
61	Ibid.....	.....	Lange.....	.....	L.	Suppuration after nephrotomy.....	D.	
62	Ibid.....	Feb. 16, 1884	L. A. Stimson..	.....	A.	Painful movable kidney.....	D.	Peritonitis.
63	Gross's list.....	.....	Archer.....	F.....	...	Wound in ovariotomy.....	R.	
64	N. Y. Med. Rec., 1882, ii. p. 302 (reprint).....	1882	Cullingworth....	.....	A.	Hydronephrosis.....	D.	Shock in two hours.
65	N. Y. Med. Jr., Dec. 27, 1884	.....	Little.....	Child, 4.....	...	Sarcoma.....	D.	
66	Schmidt's Jahrb., Bd. cci., n. s., 2s., p. 165.....	.....	Bergmann.....	.....	...	.....	D.	
67	Ibid.....	.....	Bergmann...	.....	...	.....	D.	
68	Arch. Gén. de Méd., Paris, 1884, i. p. 641.....	.....	Le Dentu.....	.....	L.	Urinary fistula after nephrotomy.....	R.	
69	Budapest, 1882, xxiv. 785.....	.....	Reczey.....	.....	A.	Sarcoma...	D.	
70	Lancet (Lond.), 1884, ii. p. 554; from Gaz. degli Ospit., Aug. 31, 1884.....	June 8, 1884	Bottini.....	M., 27.....	L.	Fistula from suppurative calculous pyelitis.....	R.	
71	Ibid., p. 966.....	Aug. 25, 1884	Sonnenburg.....	F., 52.....	...	Calculous pyelitis.....	D.	Collapse and anuria on second day.
72	Ibid., p. 1055; from Il Morgagni for October, 1884.....	Apr. 24, 1884	D'Antona.....	M., 34.....	L.	Calculous pyonephrosis.....	D.	Inanition on tenth day.

Of these 72 cases, 32 recovered, 36 died, and in 2 the result is not stated.

Of 40 females, 17 recovered, 21 died, and 2 not stated. Of 11 males, 7 recovered and 4 died. Of 7 children under 12 years old, 2 recovered and 5 died.

The site for operation was stated in 62 cases, of which 44 were by abdominal section, with 19 recoveries and 25 deaths, and 18 by lumbar incision, with 11 recoveries and 7 deaths.

The conditions demanding the operation were the following: Abscess, 2 died; calculous pyelitis, 2, 1 died; calculous pyonephrosis, 1 died; calculus, 2 cured; carcinoma, 6 died; cystic disease, 4, 1 died and 1 not stated; fibroma, 1 died; fibro-cystic disease, 1 cured; floating kidney, 3, 2 died; hydronephrosis, 3, 2 died; lipoma, 1 died; misplaced kidney, 1 died; misplaced and single kidney, 1 died; myxo-sarcoma, 2 cured; papilloma, 1 cured; pyelonephritis, 1 died; pyonephrosis, 8, 6 died; sarcoma, 4 died; traumatic rupture, 2, 1 died; tubercular disease, 4, 2 died and 1 not stated; tumor of capsule, 2 cured; tumor (?), 1 cured; urinary fistula, 4, 1 died; and wound during ovariotomy, 1 cured.

The chief causes of death were collapse, 5; peritonitis, 4; peritonitis (complicated), 3; shock, 4; exhaustion, 3; hemorrhage, 2; and syncope, 2; while anuria was a factor in 3 cases, and perhaps carbolic-acid poisoning in 1 case.

Actuated by pain, Lane's patient declared she attempted to excise the swelling, and to corroborate the statement directed attention to a cicatrix which was observed upon her abdomen. In attempting to extirpate a renal tumor by abdominal section, Tait failed on account of the great matting of the intestines; nevertheless, the tumor decreased in size and the patient improved. However, as her symptoms reappeared, he removed it three and a half months later by the lumbar incision. Polk removed the misplaced left kidney from a young woman, 19 years old, in whom there was congenital absence of the right kidney and no trace of the corresponding ureter. In this girl the breasts were large, but the labia minora rudimentary, and there was absence of the vagina and uterus, while the ovaries appeared normal, but were misplaced. After the operation frequent emesis and dry skin occurred, but sweating was induced by pilocarpine; finally, after eleven days and one hour of moderate suffering, convulsions and coma produced death.

The kidney which Morris extirpated for calculus was normal in structure, but "harder and firmer" than usual. Two attempts, both digital and with needles, had failed to detect the stone.

The object of this paper has been to present a number of cases of nephrectomy for the study of those who may not have had the opportunity to collect them. For various reasons, it was found impossible to make a complete list, therefore the table does not comprise all the cases operated upon since the paper of Dr. Harris appeared. Much kind assistance has been received from Professors Ashhurst and Gross, of this city, and Professor Weir, of New York.

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REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
Philadelphia.

(Continued from page 348.)

TREPHINING IN MASTOID AND TYMPANIC DISEASE.

AN article with this title appeared in the October number of the *Dublin Journal of Med. Sciences*, from the pen of W. I. Wheeler, F.R.C.S.I., M.D., and is presented to American readers in the *New York Med. Abstract*, November, 1884. We feel called upon to notice it here, and to criticise unfavorably the views set forth therein.

First, the statement that the membrana flaccida is the most frequent seat of perforation in the membrana tympani is just the reverse of the fact: it is a most unusual seat of perforation, as every otologist knows. It is but fair to state that the author, Dr. Wheeler, does not profess to be an aurist, and hence his inaccuracy on this score is somewhat excusable. Secondly, in the first case, notes of which he gives, in which he trephined the mastoid, there is no good evidence in the history of the case that the perforation was demanded. No pus escaped from the opening for twenty-three hours after the operation. The secretion was undoubtedly then the result of the trepanation. Fortunately, the man recovered, although the dura mater had been exposed by the operation. In

the other two operations there seem to have been symptoms warranting the trephining of the mastoid, but in both of these cases the dura mater was exposed intentionally, as it is stated. Both, however, recovered. This intentional exposure of the dura mater in the operation for trephining the mastoid seems very singular, as aural surgeons endeavor to avoid this complication in operating on the mastoid. And hence we consider the advice and directions given by the author in concluding his article as pre-eminently unworthy of following. In fact, the use of a trephine of the size he seems to have used, judging from the pictures of the button removed from the mastoid cortex, which accompany his article, is to be deprecated. (The diameter seems to have varied from one-half to three-quarters of an inch.) When the mastoid cortex is to be perforated, a small drill or a gouge is used by aurists who have performed this operation the most frequently and the most successfully. After stating where to place this broad trephine, (which is too comprehensive to be safe,) the author concludes his article with these to us seemingly remarkable words: "By adopting this course there will be no danger of wounding the lateral sinus; the tympanum and mastoid cells will be opened, giving full exit for discharge; the *dura mater will be exposed, and should pus exist between it and the cranium there will be ample freedom for its escape.*" (The italics are the reporter's.) This seems to be a strange mixture of general and special surgery, and a very poor exemplification of the latter. To trephine or perforate the mastoid cortex for pus within the mastoid cavity is often demanded, and the indications for it and the method of their fulfilment are now fully established, but a combination of them with laying bare the dura mater is nowhere set forth as desirable. To trephine the skull wall and expose the dura mater has also its indications, but does not enter into mastoid operations as a rule, and hence we have felt that the statements and doctrines contained in the strangely conceived paper under criticism should not go unchallenged by otologists.

PEROXIDE OF HYDROGEN IN MASTOID ABSCESSES.

Dr. A. E. Prince, of Jacksonville, Illinois (*St. Louis Med. and Surg. Journal*, March, 1884), calls attention to the merits of peroxide of hydrogen as a cleansing agent in suppurating cavities.

Peroxide of hydrogen is physically like water, transparent, colorless, limpid, odorless, and tasteless, with sp. gr. 1452, and remains liquid at zero. Chemically, it is one molecule of water connected by a feeble bond to an atom of oxygen, and is obtained by the action of hydrochloric acid on peroxide of barium: $BaO_2 + 2HCl = BaCl_2 + H_2O_2$. Its importance as a therapeutic agent is due to its instability. "In the presence of a variety of substances, as gold, silver, and platinum, fibrin and cellular tissue, it is decomposed into water and oxygen, becoming at the same time a powerful oxidizer."

The fact most interesting to the surgeon is the remarkable power possessed by pus to decompose this agent with liberation of nascent oxygen, which directly adheres to and attacks all the adjacent tissue for which it has an affinity, and it thus becomes a powerful destroyer of bacteria. It is claimed for it that, though inferior to iodoform as an antiseptic, it has the inestimable quality, like it, of producing little or no irritation when used about tender organs. Upon coming into contact with pus in a fetid cavity the liberated gas permeates it, and by the continued evolution of gas the cavity may be emptied of its contents, which boil out at a fistulous opening or any other vent so thoroughly mixed as to appear like froth or foam. Some ascribe to this cleansing character rather than to its antiseptic power its beneficial effects in the treatment of suppurating cavities.

Dr. Prince reports the case of Julia, 8 months old, suffering from suppuration of the middle ear following scarlatina, and after ten weeks supervention of mastoid inflammation and symptoms of general septic poisoning. When examined by him, the child had continued fever and loss of appetite. An examination of the ear revealed destruction of the drum-membrane, exceedingly offensive pus, granulations in the tympanic cavity, with swelling, redness, and heat over the mastoid, or rather over the mastoid region, because a child of this age has no true mastoid cavity any more than it has an osseous auditory canal, as these both have to grow for several years before they can be said to fully exist. A drill was passed through

the outer wall of the mastoid directly into the cavity of the tympanum, and a flexible lead wire passed through from this opening into the tympanic cavity and out through the auditory canal. All injections passed through the drainage-course thus made failed to relieve the patient. Finally a hypodermic syringeful of the peroxide of hydrogen was injected into the drainage-tract from the mastoid opening, the finger being held over the auditory meatus. The liberated oxygen seemed to penetrate the recesses of the mastoid-tympanic cavity, and finally boiled out of the external openings. By repeated injections, so long as any pus remains in a cavity the oxygen will continue to be liberated. Hence when gas is no longer evolved an evidence exists that the cavity is empty and its surfaces free from pus. The constitutional symptoms in the case alluded to began at once to improve, and the case was rapidly cured by the further use of boric acid insufflations alternated with alcohol instillations.

ON THE NECESSITY OF PROVIDING FOR THE BETTER EDUCATION OF CHILDREN WITH DEFECTIVE HEARING IN THE PUBLIC SCHOOLS.

Dr. Samuel Sexton, of New York, has written a paper with the above title (*New York Med. Record*, December 20, 1884), its object being to enlist an interest in the public school system in so far as concerns the needs of the pupils whose disabilities of hearing prevent them from advancing with scholars with good hearing, since it is believed by the author, in common with many others, "that this matter does not receive the attention which its importance demands."

The varieties of deaf children who are believed to be greatly neglected in regard to their education are the following: 1. Children with defective hearing in one or both ears and requiring close proximity and distinct utterance when taught. Of these deafness in both ears requires seating on a front row of benches, but where only one ear is affected the normal ear must be towards the teacher's desk. 2. Children very deaf, who cannot distinguish ordinary conversation in either ear when more than a few inches from the speaker, or unless the conversation-tube or acoustic fan or other aid to hearing be employed. 3. The totally deaf, in whom the auditory apparatus of the middle ear cannot be made available. This class admits of division into two subdivisions,—viz., (*a*) those having learned to talk previous to losing their hearing, and (*b*) those born too deaf to ever have naturally acquired speech, commonly known as congenital deaf-mutes.

Deafness in the schools is then considered from a physician's point of view, as it is believed that the extent and importance of the subject may be more fully realized in this way than in any other, "since where professional advice is required, opportunity is allowed for thorough examination of the hearing organs, both as regards their physical condition and acoustic functions."

Dr. Sexton's experience has led him to the conclusion that "among school-children of the poorer class great injustice is being done in permitting children to struggle for an education under the disadvantages arising from deafness without the aid of methods which experience has shown to be advantageous in such cases."

In New York City it has been shown that some children continue on at school for years while scarcely able to hear, while there are many others who hear very badly. In disregarding this matter deaf children are placed at a serious disadvantage, and time is wasted in futile attempts at instructing them, which proves a hinderance to others who can hear. Great injustice may be done to children with defective hearing, even when they have made great efforts both at school and at home to prepare themselves for promotion, if they are put back at examination, as has resulted because the principal, being unaware of the child's aural defects, has not given his questions distinctly enough for the child to hear them. Deaf children, from neglect to classify them, may be seated too far away from the teacher's desk to hear his voice, and in consequence of inability to hear are often punished for inattention and dulness. In consequence of this misunderstanding many pupils leave the school and lose advantages they cannot afford to dispense with. It is not recommended that the partially deaf should be entirely separated from the hearing pupils, yet it is advisable that pupils should be examined in regard to their hearing, and "that those found to be defective should be given every possible advantage, both in respect to seating and to distinctness of voice in teaching." The very deaf should have some instruction apart from others,

since they cannot hear in some instances words shouted into their ears. An examination of the hearing of five hundred and seventy-five school-children made in 1881 by Dr. Sexton showed that fully thirteen per cent. of the whole number had greater or less hardness of hearing in one or both ears, and that only three per cent. of them were themselves aware of the defect, and only one was thus known to the teachers.

Careful estimates have been made, showing that no more than five per cent. of the entire population of the United States have normal hearing, "but this of course does not show the number of persons defective enough to exclude them from the benefits of the ordinary common-school curriculum. The tenth census computes that there are about thirty-five thousand deaf-mutes in the United States, or one in every fifteen hundred. One-half of these are illiterate." Dr. Sexton carefully estimates the number of totally deaf children unprovided with school advantages in New York City at five hundred. He further makes the important deduction for New York City that, "out of about one hundred and forty thousand pupils in attendance at the public schools at the present time, some fourteen thousand of them would be the better for classification in respect to seating and instruction at short range, or by means of some aid to hearing, and he claims that this avenue to illiteracy — viz., defective hearing — demands attention in a large population where vagrancy and kindred evils are attracting so much attention from the vastness of their proportions.

The author then draws attention to the fact that a very considerable number of deaf-mutes may be more advantageously provided for in the public day-schools than otherwise, as in many cases parents do not like to relinquish their children for purposes of educating them in boarding-schools for the deaf-mute, as they must do if they are to be sent to such institutions as at present organized, with but few exceptions. Day-schools for deaf-mutes have been increasing in number since 1869, with the foundation of the Horace Mann Day-School in Boston. The Oral Branch of the Pennsylvania Institution, a day-school for the very deaf and deaf-mutes, was established in 1881, and the newest ones are the Scranton Oral School, 1883, and A. Graham Bell's School, Washington, D.C., 1883. In such schools as these very considerable numbers who are at present being educated as deaf-mutes could be cared for along with the very deaf who are at present unprovided for, since they both require similar methods of treatment. Furthermore, the education of totally deaf and very deaf children should be undertaken at the age of five or six years, much earlier than is feasible or is done in Deaf and Dumb Institutions. Children who have lost their hearing soon after learning to talk forget this acquisition unless kept in practice. Early education in oral schools for the deaf would enable them to retain speech, and if the congenital deaf-mute is placed in the same school at the same early age, it is not obliged to lose valuable time at an impressible age, as it does if it waits to be admitted to ordinary schools for deaf-mutes requiring a greater age for admission. Children of such tender age must be accommodated with day-schools near home, an entirely practicable matter not only in cities and towns, but in sparsely-settled districts. Other points connected with this important topic will be considered in the next Report on Otology.

"LAWN TENNIS" BACK.

BY CHARLES McINTIRE, JR., M.D., F.A.A.M.,

Medical Director, Gymnasium, Lafayette College.

SO much is written about the "tennis arm" and "tennis leg" that I may be pardoned for coining the caption to this article, although the application of the term is not strictly accurate.

While making the preliminary physical examination and measurements of the class of '88, Lafayette, last fall, I found one of the students showing such a marked difference in the development of the muscles of the right side, more especially those of the back, that I was led to inquire his favorite pastime, and found that he was passionately fond of lawn-tennis, so much so that the previous summer had almost been entirely devoted to that sport.

The accompanying photograph* shows much more clearly the marked development on the right side and the want of it on the left than any description, while the

* In the photograph accompanying the communication this want of symmetry is very evident.—ED. P. M. T.

measurements of the upper extremities also show the same disproportion. He is 17½ years old, is 1716 millimetres tall, and weighs 50.25 kilogrammes. The upper-extremity measurements are as follows, in millimetres:

	Right.	Left.
Shoulder . . .	399	373
Arm, biceps contracted	253	232
" " at rest .	230	210
Forearm, muscles at rest	235	209

The lesson to be learned from the case is an easy one. In our anxiety to provide exercise for the young, we must not forget that physical development, while depending upon exercise, is not synonymous with it, and if the exercise is carried on by one set of muscles chiefly, while we may obtain the desired benefits to the circulatory, digestive, and nervous systems, we will also obtain an asymmetrical body. Of course a single case does not afford any foundation for an argument *pro* or *con* as to the fitness of any game as an exercise, and doubtless the many are greatly benefited by the use of the racket; but a caution as to the excessive use of the one arm and an exhortation to become ambidextrous would be a fairly-deduced sermon from such a text.

In this individual case special exercise has been given in the gymnasium, having for its object the development of the muscles of the left side, and we hope before he is graduated to have him symmetrically and well developed.

The need of giving more thought to the matter of physical development by the physician, as the health-conservator of the nation, is emphasized by the examinations now commonly made in gymnasiums. A little observation and a few words of kindly advice would frequently prevent the formation of an irregular development which in after-life is difficult, if not almost impossible, to correct.

Congenital Malformation of Large Intestine.—The *Lancet* for January 31 contains a clinical report of the case of a child, two days old, operated upon at the Sheffield General Infirmary by Mr. Atkin, for imperforate anus. The operation of Littré was performed, but the large intestine could not be found. At the autopsy it was found that the whole colon and rectum were rudimentary and apparently solid, although a little meconium could be pressed through it by exercising considerable force. The anus was imperforate.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF JOHN ASHHURST, Jr., M.D.,

Professor of Clinical Surgery in the University of Pennsylvania.

Reported by Louis J. Lautenbach, M.D.

DRY SYNOVITIS, WITH INTRA-ARTICULAR ADHESIONS OF SHOULDER-JOINT.

THE first patient whom I have to show you to-day is a little girl who has received a slight injury of the right shoulder, which has been followed by pain and some limitation of the motions of the limb. Taking the arm in my hand, I find a decided crackling on movement. This is what is known as false crepitus: it is a dry crackling, which is rather felt than heard, and which is produced by the rubbing together of roughened surfaces which are ordinarily smooth. It may be intra-articular, from the friction of the head of the bone in the glenoid cavity, or it may be developed in bursæ, or in the synovial sheaths of tendons. It may occur with arthritis, and also with periarthritis. It may be connected, that is, not only with disease of the joint, but also with disease of the tissues around the joint. Between these two sources of origin it is often very difficult to make the diagnosis, and it is frequently only by the most careful examination that the intra-articular or extra-articular nature of the disease can be determined.

My first impression on looking at this patient was that the stiffness and crackling on motion were periarthritic, but more careful examination while the child is etherized shows that the tissues surrounding the joint are soft and healthy. The disease is not arthritis, but a synovial affection which is described by Mr. Barwell as dry synovitis. There is a change in the synovial surfaces of the joint, causing a dry crackling when the parts are rubbed together.

Periarthritis is a condition of considerable importance as being frequently met with and often not recognized. It has been particularly studied by French surgeons, especially by Gosselin and Duplay, who have furnished excellent accounts of the affection as observed in the tissues around the shoulder and the knee. One lesion, which is sometimes met with in this disease as located in the shoulder, has been

described for many years and has been misunderstood. I refer to the lesion described as dislocation of the tendon of the long head of the biceps muscle. There is reason to believe that in most, if not in all, of the cases in which the tendon has been found displaced from its groove, this condition has been not the result of injury, but of chronic inflammatory changes due either to rheumatoid arthritis, or, which I think is more often the case, to the extra-articular affection which we know as periarthritis.

Here there are no evidences of a change outside of the joint. I think that this is a case of dry synovitis, with a certain amount of intra-articular adhesion. I intend to move the arm forcibly so as to break up the adhesions, and then to apply equal parts of mercurial and belladonna ointment, and fix the limb for forty-eight hours to prevent any inflammatory reaction. At the end of that time the movements may be repeated, and, if the child's parents can be induced to co-operate with the surgeon in maintaining mobility, complete restoration of function may be expected. The results of treatment in these cases, however, depend almost entirely upon the care which is exercised by the parents or friends of the patient.

In trying to break up adhesions in the shoulder-joint you must fix the scapula, as otherwise it will move with the arm; then with a series of short but rapid jerks (for you want to break and not to stretch the adhesions) you should move the limb in various directions, first by flexion, then by extension, and finally by rotation and circumduction. Doing this while my assistant fixes the scapula, I can feel the adhesions giving way. By what may be called gentle violence you can thus accomplish your purpose; but of course you must not use too strenuous efforts, as by so doing you might break the bone or perhaps lacerate the great vessels or nerves in the axilla. These manipulations may be repeated after forty-eight hours, provided that the joint does not feel hotter than the surrounding parts; but if its temperature is still elevated at the end of that time, the interval must be made longer.

CASE OF SYPHILITIC OSTEITIS AND NECROSIS OF ULNA.

This young woman, with a syphilitic gumma upon her forearm, has also some sinuses around the elbow-joint evidently leading to disease of the olecranon.

Here we have dead bone present, and the process of separation is so slow in syphilitic necrosis that we are justified in interfering when we would not be so in a case of ordinary necrosis. The rule in ordinary cases of necrosis is not to operate until the dead bone has become loose, but frank sequestra do not form in syphilitic necrosis. I will make an incision down to the bone, and will endeavor to scrape away the diseased surface.

I do not expect to find here any well-marked line of demarcation between the living and dead bone. If I were to remove all the bone which did not appear entirely healthy, I might perforate the olecranon and thus open the joint, a complication which, although not very dangerous, yet should be avoided if possible.

I make a longitudinal incision, push back the tissues, and endeavor to remove the diseased bone without going further than is necessary. I must not get too near the tip of the olecranon, as I do not wish to interfere with the attachment of the triceps muscle. With the thumb-gouge I can scrape away the dead bone. Probably the surface only is necrosed, and I can thus get a sufficiently healthy layer of bone to allow granulations to form and the parts to heal. There are no sequestra here to come out. The operation is rather like one for caries.

We will over the wound use the ordinary dressing of oiled lint, oiled silk, and bandage. On the gummatous tumor we will use mercury and belladonna ointment, and will get by this means both the anodyne effect of the belladonna and the absorbent effect of the mercury. We will put the patient under the use of iodide potassium continued for a long while. Under this treatment she will no doubt improve, and probably the ulceration will heal. I must say, however, that operations for syphilitic necrosis are not very satisfactory, and that we may not succeed in obtaining a cure without further interference.

APOMORPHINE IN ASTHMA.—Dr. Weber, of Darmstadt, has used apomorphine, in doses of one-twelfth of a grain three times a day, in chronic asthma, with success. One patient was entirely relieved who had been a sufferer for thirty years.—*Chicago Medical Journal.*

TRANSLATIONS.

Carbolic-Acid Inhalations in the Treatment of Diphtheria.—Dr. Ludwig Stumpf, of Munich, contributes a very valuable paper on the treatment of diphtheria to the December (1884) number of the *Deutsches Archiv für Klinische Medicin*. He concludes that the diphtheria of the throat, nose, vagina, and mucous membrane of all the air-passages is in the first place a local disease. Commencing as a purely local affection, it will progressively develop into a general systemic infection of the whole body. From the local nature of the infection, topical treatment of the disease is justifiable and in accordance with the opinions commonly held at present. If a local disinfection is accomplished soon enough in accordance with the Listerian principle, all can be accomplished which is needed. The best treatment is the inhalation-treatment. Up to the present time we have no remedy against the general systemic affection. The object of the physician should be to grasp the local primary disorder as speedily as possible, before the general system has been invaded. The importance of this primary treatment, therefore, cannot be overestimated. By neglecting the proper local treatment the general infection of the body will result, and when this takes place our medical efforts are often unavailing. Such cases are generally fatal.

The value of a remedy in the treatment of diphtheria is to be estimated by its disinfecting properties, or, in other words, its bactericide action. The best means of combating the disease is the application of medicated vapor by inhalation, selecting those remedies which possess the greatest antiseptic properties with the least injury to the patient. Helfer was the first to use the atomized solution of carbolic acid in proportions of 1 : 50 and 1 : 30, and has published his excellent results in the treatment of sixteen cases by this method. Rauchfuss considers this application too strong; but Stumpf, on the contrary, believes that these remedies have been disappointing to many experimenters because they were too weak! The full antiseptic and parasitic action of the carbolic acid is only developed by a five-per-cent. solution. Stumpf uses a solution of this strength from five to seven minutes by steam atomizer every hour. No disinfecting remedy is so powerful in its operations and at the same time so harmless to the patient as carbolic acid. Its action requires only to be seen to be appreciated, as demonstrated in the prompt cleansing action of the mouth and throat. After a few inhalations of a five-per-cent. solution the disagreeable odor of the breath disappears, and the loosening of the discolored membrane goes on rapidly without any odor. This treatment of the membrane by carbolic acid is painless, and so much the less painless in proportion with the amount of the deposit. If properly managed, the destruction of the healthy mucous membrane by this treatment is not to be apprehended. By the admixture of the steam in this treatment, the five-per-cent. solution is really reduced to three or even two and a half per cent. by the time it reaches the throat. [During its use attention should be given to examination of the urine to detect any evidence of toxic action.] P.

Quinine in Typhoid Fever.—Dr. Goldscheider, in the December (1884) *Deutsches Archiv für Klinische Medicin*, in an article upon the Action of Quinine in Typhoid Fever, says that undoubtedly quinine has an effect upon the "typhus curve" which is usually exhibited after each dose. This effect is neither specific nor absolute, but it requires certain conditions. It is dependent upon the quality of the fever. It does not in general break the typhoid fever, neither does it shorten it, but operates in diminishing the pyrexia. It supports the remitting tendency, and it has a certain influence upon its exacerbation. In consequence of this, like every remedy, it has an uncertainty in its action, because its effect is dependent upon unknown conditions. In severe forms of the disease the therapeutic effect is in most cases unsatisfactory, particularly in the first half of the disease; during the second half it operates better. It is in the latter stage especially that its antipyretic effects are best observed. The general condition and the pulse also will be improved by its employment at this stage of the disease. P.

Eczema due to Iodoform.—In the *Deutsche Med. Wochenschrift* for July 24, 1884, Dr. A. Neisser cites several cases in which iodoform applications caused an obstinate eczematous eruption. Possibly the drug was adulterated.

PHILADELPHIA
MEDICAL TIMES.

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EDITORIAL.

OVERWORK AND NEURASTHENIA.

IN the Toner Lecture delivered last year by Dr. Chas. K. Mills, of this city, the subject of Mental Overwork and Premature Disease among Public and Professional Men was very appropriately selected, at the suggestion of the founder of the lectures, and to its consideration the lecturer brought the results of considerable clinical observation and original investigation. His statistical studies of men in political and official life, and also of professional men considered as a separate class, favor the views already generally held,—that intellectual work does not of itself injure health or shorten life, but mental overwork, particularly when associated with emotional strain, is a frequent cause of nervous break-down and premature disease. He considers that the longevity of men in the higher walks of public life is less in this country, generally speaking, than in England, basing his opinion upon the average age at death of public men. It does not appear, however, that sufficient importance is given to the fact that in Great Britain the responsibilities of political life are, as the rule, begun later, while the time actually devoted to the duties of public life is less and the attendant mental strain much lighter, than here.

The lecturer cites, among the special causes of premature disease in public life, the onerous and perplexing duties required by service on committees, the uncertainties and disappointments of this life, and the strain to which candidates are subjected during political campaigns; with lack of recreation, and the social excesses and abuses at the national capital.

Among physicians, lawyers, and journalists the performance of brain-work under pressure for time, and under bad hygienic conditions, is a common cause of ill health. Defective education and pecuniary embarrassment are also special causes of nervous break-down and premature disease among physicians and lawyers. The mischievous system of severe competitive examinations in vogue in many communities is justly and unsparingly denounced as injurious both to teachers and scholars.

The connection between neurasthenia and lithæmia, which had been noticed by Murchison, Da Costa, and others, is acknowledged, and their frequent concurrence admitted. Dr. Mills considers, however, that they are by no means convertible terms. The connection between mental states and disease of the body is also dwelt upon, and among the diseases most likely to be developed by mental overwork he places phthisis, diabetes, and Bright's disease; finally the conclusion is deliberately expressed that many diseases not nervous in their seat or manifestation are developed directly or indirectly as the result of mental and nervous strain, through exhaustion, impairment, or lesion of the centres of the organic functions; in fact, overtaxing the mind and nervous system may be the exciting cause of almost any serious disorder to which chance, accident, imprudence, or infection exposes the individual.

This most important subject is ably presented by Dr. Mills, and in a manner which suggests an interesting topic for discussion. The pathology may be summed up in the statement that "in cases of mental overwork tissues fail to regenerate as fast as they break down." But may not the assimilative and regenerative powers be greatly reduced by accident or disease? Of course it is admitted that overwork is a purely relative term, and, while one would find his mental powers

severely taxed by a simple arithmetical problem, another will excite astonishment by his extraordinary capacity for mental labor. It would be of great interest and value to inquire into the precise condition of the brain underlying temporary differences of mental power, apart from the influence of education or habit, and aside from the native difference in brain-structure. Admitting the truth of the observation, it would be very profitable to study the exact conditions which make cerebration more facile and efficient at one time than at another.

It is well known that brain-workers sometimes can do a great deal, and at other times, when "not in the humor," they cannot write at all. Now, in what does this humor consist? Has it a physical basis? How is it affected by states of the brain or of the blood-supply? How is it affected by stimulants or by drugs?

Under the conditions of modern civilization, the question how to maintain the brain at its highest point of efficiency compatible with its normal nutrition is one of the most important that could be discussed. We think that its elucidation would powerfully influence public opinion as to the dangers of stimulants and narcotics, and might possibly tend to decrease greatly the consumption of alcohol and tobacco.

A NEW HOSPITAL WANTED.

IF, as the French say, nothing happened except the unforeseen, we should not be called upon to chronicle the disaster of the 12th instant, in which a wing of the Insane Department at Blockley was destroyed by fire and at least twenty of the unhappy inmates were suffered to perish miserably. It does not often happen that a prophecy is so promptly fulfilled as that contained in our last issue, in which the warning was given that the Kankakee horror might be repeated at our very door if prompt action were not taken to guard against it.

The report of Drs. Wood, Mitchell, and Mills, of the consulting medical staff of the Hospital, to the Board of Guardians, pointing out some of the glaring defects in construction and administration in this department, was indeed timely, and they are to be congratulated upon having done their duty. It is true that one of the city fathers has originated the striking idea that the publication of their letter to the Board, showing the unprepared condition of the hospital for just such an accident as occurred, was the indirect cause of it by inciting some weak-minded inmate to set fire to the building. Although this hypothesis, considered as an explanation of the accident, might satisfy the mind of a political partisan, it by no means furnishes a reason for the disgraceful state of affairs that made such an occurrence possible. It should be said, to the credit of the medical attendants and Miss Fisher's trained nurses, that by their exertions the disaster was much less fatal than it might have been.

The fact is that Philadelphia needs a new hospital and a new almshouse. There is no good reason at present for associating these institutions, but, on the contrary, many reasons in favor of keeping them as separate and as distinct as possible.

The present is a good time to move in this matter, while public attention is still directed to it. The various medical societies should as soon as possible adopt resolutions calling attention to the needs of the sick poor, asking that the Philadelphia Hospital be torn down and rebuilt in a style more worthy of the city whose name it bears, and requesting the removal of the insane department and the almshouse to a location some miles away from the heart of the city. The exigency is so imperative as to warrant calling a public mass-meeting to memorialize Councils upon the subject, and in this matter physicians should take an active and prominent part.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

AN attempt will be made at giving a *résumé* of what is going on of practical importance, at present, in the hospital clinics and the colleges of medicine here.

After-Treatment of Breast-Amputations.—The immediate union, or by "first intention," is not admitted to be the best way of attempting to dress these wounds by many of the Paris surgeons. Here, as elsewhere, they are divided into two camps. M. Mouchez has lately given an account of eleven cases of removal of breast tumors. Several of them were very serious cases, but all of them were united at once under the antiseptic system and healed by first intention. M. Mouchez is of the opinion that a return of the tumor is often prevented by immediate union, or at least that a longer delay is procured in this way than by the old system. M. Verneuil, speaking at the Surgical Society, said, "For my part, I am opposed to any attempt at uniting breast-wounds at once. Unless they are slight ones, made for very small benign tumors, the immediate reunion of the parts presents grave dangers, and I am sure that many surgeons will agree with me in this matter. It is always very difficult to unite them, and this very fact is a strong argument against doing so. Many of these operations, properly performed, leave a wound of at least twelve to fifteen centimetres wide, which is almost, if not quite, impossible to join. This being so, those who wish to have an immediate reunion are forced to do what I call very parsimonious operations, and such attempts will do more than anything else to bring about a return of the tumor. I only want the record of my operations at La Pitié Hospital to show you that these wounds are not at all best treated by an attempt at union by first intention. In my last thirty-five operations I had only one death, which was that of a woman who had a cancer that had its seat in a deep organ. In all of these cases I had no erysipelas or any other complication, except in one case, which was that of a young woman upon whom I operated for a small adenoma; and, as the incision was slight, I thought I was justified in closing at once, but with bad effects, for erysipelas came on. I prefer even to exaggerate my tendency to leave these wounds open rather than to attempt to reunite them at once. It may be said that the cure takes a long time. What are the facts? My results are these: When I am forced to clean out the axillary space, it takes two months in all to get a perfect cure; but the most of my patients get up after fifteen days, and at the end of three weeks they return home to finish their cure. Now, what do we see with immediate reunion? It takes them at least three weeks to heal, and when it succeeds it almost always leaves a point open which takes a long time to cure."

M. Desprès followed in the same strain, and stated that it was only a deception of the eye to see these wounds heal up, for most of them left a fistulous opening that was very difficult to heal and predisposed to erysipelas. He said he dressed them open with a little lint and simple cerate.

M. Polaillon said he was a partisan of immediate reunion if the lips of the wound could be made to meet. He uses Lister's dressing.

M. Le Dentu was in favor of a mixed system of reuniting a part of the wound and leaving the rest open.

M. Trélat. "I am not an eclectic, but I have a system in this matter of primitive reunion. I have always practised it and defended it. It is a rule that I do not depart from if I can help it, but the possibility of doing it will vary according to circumstances. Asepsis is indispensable to success, more so than antisepsis, and I hold that reunion by first intention or an attempt at it is dangerous in the hands of those surgeons who have not been well schooled in the delicate manipulations of asepsis and antisepsis.

"With regard to relapse, I do not believe it will be different in one or the other mode of dressing, if the operation has been complete, which it can be in either system. Differing from M. Verneuil, I commenced by treating tumors of the breast by an open dressing, but since the introduction of the antiseptic methods I have reunited the lips of my wounds at once and whenever possible. If Velpeau and Nélaton did not succeed, it was because they did not take the same precaution that we do,—to leave a drainage-tube, that puts all danger aside of closing a wound."

M. Verneuil said, "I affirm again what I said before: that if these tumors are taken out, as they should be, by removing a large band of the skin and the aponeurosis of the pectoralis major, and even a part of that muscle, it will be almost impossible to make an immediate reunion."

M. Champonnière, in advocating closure of the wound, said, "We make very wide cuts and take out as much as do the partisans of the open system, but that does not prevent reunion unless the tumor has passed from the breast and invaded the skin for some distance beyond. For four years I have always made an attempt to reunite, and when I fail I am no worse off than those who prefer the open dressing."

Treatment of Intestinal Occlusion by the Galvanic Current.—Dr. Boudet has just presented to the Academy of Medicine a new apparatus which he claims can be used by any physician, even should he not be accustomed to the use of electrical applications. By its use, out of sixty-one cases it only failed seventeen times. Of these seventeen, eight were

operated upon by good surgeons, with the result that only two survived. This leaves forty-four cases in which this electrical application was successful, or seventy-two per cent. of all the cases,—a very good showing. The only contra-indication is cardiac asthenia. The apparatus is described as follows:

The intestinal rheophore is composed of a large gum sound, which is to be introduced into the rectum as far up as possible. This sound is armed inside with a metallic hood, that does not pass beyond the eye of the sound. The mandrin, or hood, is connected by a wire to one of the poles of the battery, and it and the sound are connected by means of a rubber tube with a small pump full of salt water. The warm salt water is made to pass through the sound, and at the same time it is charged by the metallic mandrin inside the sound, so that the water passes into the intestine, carrying the electricity to all parts of the mucous membrane. By this plan the danger of direct chemical action is averted, as the extremity of the metallic point does not pass beyond the rubber sound, and is thus isolated. The other pole of the battery is a large plate of metal covered with chamois leather, which is to be applied to the dorsal or abdominal region according to the case. The intensity of the current varies from ten to fifty milliampères, and the duration of its application should be from five to twenty minutes.

Doundakine.—M. Bochefontaine, of the Physiological Laboratory at the Hôtel-Dieu Hospital, is one of our most energetic workers. It was he that swallowed a pill composed of cholera microbes during the late epidemic, to prove that they did not cause the disease. He has lately been experimenting on this drug, the Doundakine, or Doundaké. It is furnished by the *Sarcocephalus esculentus*, one of the Rubiaceæ family, and is grown in great profusion along the African coast from Senegambia to Gaboon. It is an astringent and a real febrifuge, claimed to be equal to cinchona bark. No alkaloid has yet been extracted from it.

Kairine and Antipyrine.—A recent article has brought these medicines into prominence, and now there is great inquiry about them: they are both powerfully antipyretic.

When either quinine or cinchonine is heated with caustic potash, it gives off a vapor which when condensed produces an oily alkaline liquid that has been called quinoleine. The Germans have obtained a number of derivatives of this substance; among them are kairine and antipyrine; they are both soluble in water. Kairine is given in doses from 0.30 to 50 centigr. every hour; the antipyrine is employed in solution:

Antipyrine,	25	grammes.
Alcohol at 90°,	50	"
Syrup orange-peel,	200	"
Distilled water,	125	" M.

Dose of the solution, 3 to 7 grammes, taken at one hour's interval, in the afternoon, when the fever comes on.

These doses make the temperature fall from one-half to two degrees centigrade, and it will often fall to the normal, but rises after two hours' time. Antipyrine causes abundant perspiration and a feeling of well-being; there seems to be no accumulation, and the medicine can be continued for weeks at a time (for five weeks it has been given): it is usually very well supported, but sometimes causes vomiting. There is no injurious action on the nervous system. Both of these remedies are employed in all fevers, in tuberculosis, septicæmia, pyæmia, etc.

Antipyrine was discovered by Knorr in Germany, who sold the right to manufacture it to a firm called Meister Bruning & Co. They in turn sold the right for France to a company who were preparing to make it here. According to the French law, however, no medicine can be patented; but still a process of manufacture can be patented, so the company are trying that dodge, with several prominent doctors here against them. It is hoped that it will be declared free here, when all the great houses will make it, and after a more extended trial we can see if it really has the wonderful powers attributed to it.

While on this subject, it may be interesting to give some of the remedies that were presented this year for the cure of diphtheria.

Diphtheria.—Most of your readers are no doubt aware of the great prize called "*Prix de Saint-Paul*" here, which offers twenty-five thousand francs, or about five thousand dollars, for any remedy that will cure this disease. The following are some of the more serious remedies offered this year:

Quinoleine.

Sulphate of quinine in large doses, three to four grammes a day.

Acid salicylic and alum as a gargle.

Heavy petroleum oil.

Combustion of a mixture of turpentine and gas-tar, to be burned in the room.

Salicine.

There were also the usual number of witches' and other crazy people's cures.

Treatment of Sciatica by Refrigeration.—Dr. Debove has been obtaining excellent results by spraying ether all along the course of the nerve.

Tuberculosis.—Prof. Potain employs the following:

Chloride of sodium,	10	grammes.
Bromide of sodium,	5	"
Iodide of potassium,	1	"
Distilled water,	100	" M.

Sig.—A tablespoonful (15 Gr.) every morning in a glass of milk.

Palpitation of the Heart.—Prof. Potain, of Necker Hospital, recently reported a case of a woman 35 years of age, who had entered for violent palpitations of the heart. This

symptom, he said, seemed to him to be hardly ever a sign of real heart-disease, so much so that it had been said that when "a person complained of palpitation, look for the cause almost anywhere but the heart." This is perhaps bad advice, but it must be admitted as incontestably true that a large number of these patients have nothing the matter with the heart. Nervous palpitation comes from a variety of causes. It is enough almost to say that our patient is a weak, nervous woman, to know that she is particularly impressionable to nervous palpitations; but you must not think that it is a malady special to women, because it is frequent in men. It is true that men are less nervous than women, but when a man is nervous it nearly always manifests itself in palpitations of the heart, real or imagined.

"It is a long time since I have stopped counting the number of young men who have been brought to me for heart-disease between the ages of 17 to 20, before they have done their military service, who afterwards made as good soldiers as any. In these cases the palpitations are simply the result of rapid growth, a sort of hypertrophy of adolescence, which a little convallamarine or iodide of potassium will soon set right.

"We also see these palpitations in middle-aged men who are very nervous: we call them hypochondriacs. Anæmia is also a cause. Among the palpitations of this order can be ranged those that are consequent on certain intoxications, as the exaggerated use of tea and coffee,—very common among the spinsters of old England, who indulge in too much tea. Then there is tobacco. No doubt it will be said that plenty of excessive smokers do not have palpitations; but that does not prove that nicotine will not produce them in persons who are predisposed to such a weakness. In some people who badly digest certain kinds of food, it is enough to produce an attack of palpitation of the heart after eating them; others will have it from certain wines or liquors. Hepatic disease will produce it. In phthisis it is not at all rare. It has been said, When a patient comes to you complaining of palpitation, examine his lungs; when he complains of shortness of breath, then examine his heart. This is an exaggeration, without doubt; but you will be surprised to find how much truth there is in it. Women with uterine troubles will often have palpitations.

"All these different causes will have to be thought of; then try repose, and see if the symptoms are simply nervous or not. There is also a good means of diagnosis in digitalis, for its administration will be without any appreciable action if the palpitations are simply nervous; but if they are kept up or exaggerated by any organic lesion, no matter how small, you will see the characteristic effect of digitalis."

"*Bruits Extra-Cardiaques.*"—At a late clinic, Prof. Potain, in referring to these outside cardiac murmurs, spoke as follows: "A large number of observers have remarked these murmurs in persons in whom no lesions of the orifices could be detected, and they have given many reasons for their cause and nature. Laennec gave an opinion that they resulted from a spasm of the cardiac muscular substance. It has been asserted that these same 'bruits' are the result of an irregular vibration of the folds of the valves, but this is an hypothesis that is not founded on fact or sound reasoning. Again, these murmurs have been considered as resulting from a mitral insufficiency that is purely functional; but the authors of this last theory give no reasons for it. Parrot said that they arose from the insufficiency of the right auriculo-ventricular valve. Laennec remarked that on making these patients suspend their respiration the murmur would stop, while real cardiac ones would continue; but this is very uncertain, and in the greater number of patients it will fail.

"I have studied these cases with great care, and think I can say that these murmurs are to be found very often, as a large number are seen yearly in this hospital. They arise from a rapid inspiration of a certain quantity of air in that part of the lung that is situated between the cavity of the thorax and the ventricle. At the moment of the ventricular contraction a sudden separation of the side of the heart and the walls of the thorax takes place, the lung is drawn into the vacant space made, thus increasing its size; the inspired air that follows this increase in volume is the cause of this '*bruit de souffle.*'"

Treatment of Porrigo, or Eczema Capitis.—Dr. Descroizilles, speaking at the Hôpital des Enfants, said, "This scurf or scall, called popularly '*gourmes*' in children, is quite common, and it will be of practical use to you if I give you our mode of treating it, with a few words of advice. The old pathologists did not admit of treating it at all, and they considered that if you removed the scurf and got rid of the crusts you would bring on all kinds of trouble, including most formidable cerebral affections. But we moderns have not adopted these views; perhaps we have put them aside too much, for one often does see some intercurrent malady appear with the disappearance of the scurf. I believe it is reasonable to take into account the common belief that there is danger in removing these crusts: so I advise you to adopt the wise precepts of Rilliet and Barthez, who said, 'Do not attempt to destroy this scurf when you find that any trouble follows any diminution of the morbid secretion, or if the general health of the child improves as the eruption progresses.' You must also abstain from action if the cutaneous affection has come on after an ophthalmia, or if any eye-trouble follows after the treatment for

removal has commenced. If the porrigo occupies a great extent, do not attack it all at once, but try a part. As a last precept, 'go slow!' in all circumstances.

"The treatment is mostly with emollients or weak astringents, or applications of rice or starch-powder, subnitrate of bismuth, or oxide of zinc, with olive oil. When the concretions have fallen, good effects are obtained with pomades of vaseline, to which may be added tar, tannin, or calomel, one-twentieth part. Sometimes you may try oil of cade, cod-liver oil, or some of the sulphur preparations, looking at the same time to the general health of the young subject.

"But it is by swathing the parts with a rubber cloth that you will do the most good, taking care to take off the envelope as often as twice a day and wash it with a solution of oak-leaves in water. The bandage must not compress the parts, but fit loosely. On the head a cap can be fitted, but it must not fit tightly. The face may have a loose mask. The part affected we wash with an astringent liquid, and the apparatus is kept on night and day. Thus separated from the air and submitted to a uniform temperature, the skin will clean itself promptly usually in seven days."

Cocaine.—The papers and the clinics are wild over this new local anæsthetic, or, as De Wecker calls it, "paralyzer," for he claims that it is on the extreme ramifications of the nerves that it acts. Panas, Landolt, and all the ophthalmologists are actively experimenting with it. Even the dentists have their say, to the effect that they destroy the dental pulp with it, and by its use operate without pain on cavities that are or were exquisitely sensitive. The druggists are also active, and are making all sorts of "pastilles" that they announce as sure cures for all troubles of the larynx, gastralgia, and nervous vomiting. At a meeting of the Paris Société de Chirurgie on December 31, M. Cazin stated that he had used it in a case of vaginitis in which, for that cause, the patient had been unable to have sexual connection for years. The application of a solution of cocaine on the vulva and in the vagina was sufficient to make the hyperæsthesia of the region disappear during the time necessary for coition.

We have now plenty of hydrobromate of cocaine made by a French house.

Dr. Doleris, who has charge of the "*Maison d'Accouchement*," has just told us of some of his experiments with the drug. He has been able to suppress entirely the pain accompanying the dilatation of the cervix, also at the moment of the expulsion of the fœtus, during the last period of confinement, He also obtained a very notable decrease in those perineal pains that are so severe for many women, and without interfering with the normal birth of the child.

M. Paul Bert has also been making some little experiments, and he finds in vesication that all that was needed to entirely suppress the pain was to make an injection into the sac and to cover it with a cloth imbibed with the cocaine. He remarked that the insensibility was not uniform; that it presented itself in the form of little islands, with a sensitive interval between them. It would seem, then, true that it acts on the terminal points of the nerves.

M. Regnard placed a fish in a solution of cocaine, and in a few minutes it seemed to cease to breathe; but it was only a suspension of respiration, as the quantity of oxygen in the water did not vary, and the production of carbonic acid was not noticed. At the end of two hours the fish was put into fresh water and revived.

The new French Surgical Congress, we are informed by Dr. Pozzi, the eminent surgeon of the Lourcine Hospital, will hold its first session in the early part of April, at the Medical School, which will then be vacant for the Easter holidays. Some very interesting subjects will be treated, such as

"What are the Best Means for curing Cold Abscesses?"

"What Indications will the Examination of Urine furnish to Surgical Practice?"

"What are the Best Dressings to Employ in the Army when in the Field?"

"What are the Indications for Operation in Deep Wounds of the Abdomen?"

"The Origin and Nature of Coxalgia."

"Indications for Trepanning in Traumatic Lesions," etc., etc.

A very curious study is being made of the cause of the very high rate of mortality in children in France, which is estimated to have been for some years as high as one hundred thousand a year in all France, or say ten millions in the last hundred years. It is in great part caused by the habit of the French women of all classes in the cities sending their children out into the country to nurse. It is astonishing to strangers in Paris and the large French cities to see so few young children in the streets. For a number of reasons, very few children are brought up in Paris. First is the want of space; then the fact that proprietors of many apartments will not rent them to people who have children. Moreover, it has been the custom for years to send the children out to nurse, and so the "baby-farming" system flourishes here more than anywhere, and is probably principally responsible for the above frightful mortality.

Dr. Germain Sée and Prof. Hardy are having it tooth and nail over the treatment of pneumonia. Dr. Sée claims to have found the bacillus of pneumonia, and calls this form of it "*pneumonie parasitaire.*" His treatment is expectant, and he discards bleeding and all depressing medicines like antimony tartrate. Sée is now giving a series of lectures on asthma, in which he defines as a trinity asthma, emphysema, and chronic catarrh.

The following is a list of the principal recent papers and works of some of the most prominent French doctors, and it will show their present line of thought:

Sappey.—"Effects of the Experimental Lesion of Peduncles of the Brain."

Ball.—"Prolonged Dreams."

Dujardin-Beaumetz.—"Intestinal Antiseptic Medication."

Hardy.—"Broncho-Pneumonia and Commencing Tuberculosis."

Tripier.—"Deviations of Cardiac Rhythm associated with Epilepsy."

Vulpian.—"Tabes Dorsalis."

Trélat.—"On the Value of Plastic Operations of the Palate, and the Age when they should be attempted."

Doleris.—"Embryotomy with the Hook and Cord. Recommended by Dr. Pajot."

Terrier.—"Clinical Remarks on a Third Series of Twenty-five Ovariotomies."

Guéneau de Mussy.—"Study of the Hygiene of Moses and the Ancient Israelites."

Germain Sée.—"*Pneumonie parasitaire*, Acute Bronchitis, Gangrene, Cancer, and Hydatids of the Lungs."

Fournier.—"Lessons on Tabes of Syphilitic Origin."

Jaccoud.—"Medical Lessons at La Pitié Hospital."

Galezowski.—"Diagnosis and Treatment of Ocular Affections."

Gosselin.—"Letter on the Treatment of Hæmatocele."

Panas.—"Local Anæsthesia of the Eye with Cocaine."

Gallard.—"Clinical Lessons on Menstruation and its Troubles."

Siredey.—"On the Diagnosis of Typhoid Fever in the First Stage."

Auvard.—"Corrosive Sublimate in Obstetrics."

Medical Study in Paris.—A few words on the opportunity for observation and study in Paris may not come amiss. While there is a good deal of feeling among French students against foreigners, which they lately showed by a long series of letters to the papers and in signing petitions to the Minister of Public Instruction, still the professors and all the hospital doctors are very courteous, and they willingly show a stranger all over their wards and explain all the cases. The students seemed incensed particularly at the ease with which up to the present quite a large number of women who are of Russian nationality have obtained permission to enter the Medical School without first obtaining the French degrees of Bachelor of Arts and Sciences, as they (the French) are compelled to do. This has been accorded to most foreigners, but is now refused to many unless they can show diplomas of study equal to those of the French students. The women, too, had applied to be admitted as *internes* to the hospitals, where they are already allowed as *externes;* but this is strenuously opposed. All this does not amount to much except to those who may wish to obtain the French diploma, which will now not be given unless the candidate passes all the examinations, eleven in all, commencing with botany, zoology, and chemistry, and going all through the other branches, with two practical proofs of operative ability on the cadaver, one of dissection and the other of amputation. This is the difficult side of it now. For the nice side of Paris study, any one who has a wish to study here can have more for nothing in the way of practical medicine and surgery than anywhere else in the world.

There are over twenty hospitals in which every morning you can enter without fee of any kind, and follow the doctor from bed to bed, and see the patients, examine them, and hear his treatment. This from 8 to 10 A.M. Then at 10 you may attend a clinic, either medical or surgical, and see the best professors perform operations. You may then go into the consulting-rooms and see the treatment given to those poor people who attend them; all this without fees. This will take all the morning. Then in the afternoon you may go to the Medical School and attend all the lectures without any charge. All are welcome who choose to enter. Should you wish to attend any of the practical laboratories of chemistry, physics, pathological anatomy, etc., or dissections, the fee is eight dollars for the year. The new dissection-rooms in Paris consist of eight large buildings that have just been built and opened this winter. They have been built of white stone, are very lofty, and "material" is plenty, some two hundred cadavers on the tables all the time. This course is from 12 noon to 4 P.M., a lecture being given from 12 to 1, or 1 to 2, in each building, by one of the eight "Prosectors." Eight dollars, or forty francs, will admit any doctor to all this. In regard to obstetrics, there is at least *one birth daily* at the Faculty's "*Maison d'Accouchement*," at which you may "assist" gratis. This also occurs in three of the hospitals. There are quite a number of outside lessons (private), given by the younger professors for about twenty to thirty dollars a course. A knowledge of French is of great importance to take advantage properly of all that is given away; but at the same time one who only wants to see and make his own diagnosis can visit a few hundred different kinds of "*malades*" every day and see the operations done without any charge. This is spoiled a little by the fact that living is dear in Paris. Even in the "Latin Quarter" you will not be able to live, and poorly at that, under ten to fifteen dollars a week. The lowest board per month is forty dollars.

The actual number of students entered on the books at the medical school here is four thousand, of whom five hundred and thirty-

eight are foreigners, mostly Russians, Poles, Roumanians, and Serbs, and a few Spaniards and South Americans; only two or three English and Americans (United States). The number of women admitted this year is seventy-eight, of whom only thirteen are French, the rest mostly Russians and Poles, one American. No difference is made between the male and female students. You will see two women and three men often assigned to dissect one male or female subject, just as it happens. One can also see a woman do a post-mortem on a male subject. The women-students are assigned to and visit the male wards, and "assist" at all the operations, including catheterization.

J. Linn, M.D.

Paris, January 24, 1885.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A STATED meeting was held January 26, 1885, Daniel Lewis, M.D., President, in the chair.

AFFECTIONS OF THE EAR INFLUENCED BY OR DEPENDENT ON MALARIA AND DEFECTIVE DRAINAGE.

Dr. O. D. Pomeroy read a paper with this title, and said that the question was one which was beset with difficulties, the chief difficulty being to determine to what extent the symptoms might be due to malaria or to quinine. He quoted extensively from authors who had reported cases of ear-disease of supposed malarial origin, including the names of Weber Liel, Hotz, Voltolini, and others. In some of the cases bad house-drainage evidently played an important rôle in the etiology or continuation of the disease. The symptoms usually consisted of chills and fever of an intermittent type, of tinnitus aurium, etc. Weber Liel said that in the treatment quinine alone in large doses gave relief, and the earlier it was prescribed the more thorough and rapid would be its action. A change of air had effected a cure in some instances when all other means had failed. Dr. Pomeroy related the case of a man whom he saw at the Manhattan Eye and Ear Hospital, in 1883, who had lived in a malarious district, and whose ear-symptoms improved under the administration of quinine, although the discharge from the meatus did not cease until after local applications of a solution of nitrate of silver.

In order to determine as far as possible the influence of malaria in the production of ear-affections, he had sent interrogatories to thirty-six different aural surgeons in the United States and Canada, to which he had received replies from twenty-eight, including the names of Miller, Blake, Seely, Theobald, Burnett, Holmes, Jones, etc. Most of these gentlemen did not give credence to the belief that ear-diseases might be directly dependent upon malarial poisoning, although not a few had seen cases in which the aural affections were aggravated by malaria or bad drainage.

In conclusion, Dr. Pomeroy expressed the opinion that malaria and bad hygienic surroundings, including defective house-drainage, exerted a modifying influence on ear-affections, but he could not accept the view expressed by Weber Liel, Hotz, and Voltolini, who described cases of ear-disease caused by malaria.

DISCUSSION.

Dr. Hackley opened the discussion, and said he thought we might perhaps have gained some information from the homœopaths with regard to the influence of malaria upon ear-affections unmodified by the effects of quinine, for cases treated by their methods, it was supposed, ran a more natural course. He himself was in the habit of administering quinine in cases in which ear-disease was complicated by malaria. As to the occurrence of aural troubles from malarial poisoning, he supposed it would probably depend indirectly upon different states: first, upon pharyngeal trouble extending to the Eustachian tubes; second, upon so-called vaso-motor disturbances; and, probably, upon affections of the internal organ of hearing arising through changes in the vaso-motor condition. But quinine and malaria were so badly mixed up in the cases of ear-trouble which he had seen that might have a bearing upon the question under consideration, that he was unable to say which had exerted the more important influence.

Dr. Simon Baruch would enter a protest against the increasing tendency to attribute all simple, as well as complicated, pathological conditions to malaria as the chief etiological factor. That there were any cases of malarial ear-disease he regarded as extremely problematical. He had resided in a malarial district for twenty-five years, and never before had he heard of ear-disease being attributed to malarial poisoning. He felt sure that in the cases whose histories were read by the author of the paper there must have been some hidden error. Although many diseases had been ascribed to malaria, standard authorities had failed to recognize any of the pseudo-malarial affections as due to malaria, and in this way they had refused to shield those careless diagnosticians who took malaria as a text for every slip in their diagnosis. He quoted from the statistics of the Board of Health of New York, showing that a much larger proportion of deaths from malaria were reported than would be recognized by any authority. There must therefore have been a large number of errors in diagnosis.

Because benefit had been derived from quinine in certain cases of ear-trouble it did not prove that they were due to malaria. In reviewing the cases reported by Weber Liel, Hotz, Voltolini, Pomeroy, and others, he thought he could find very positive evidence that the cause of the ear-affection was not malaria, although malaria coexisted in some of the cases.

Dr. JOHN C. PETERS had had several attacks of fever and ague years ago, and in the first attack, when he was taking no quinine at all, the most troublesome symptom was tinnitus aurium. He also referred to the case of a lady in whom the ear-trouble was evidently due to bad house-drainage, and recovery took place after the administration of quinine. Dr. Baruch had said that cases of malaria were reported in New York in midwinter, and cast doubt upon the diagnosis because the best authorities had stated that it could not exist when the temperature fell below a certain point. Dr. Peters would call attention to the fact that water and bad drainage existed under many of the houses and streets in New York during the entire year, and consequently, if the houses were kept warm, malaria was liable to develop. There were not a few cases of mixed malaria; that is, of disease due to the combined influence of bad drainage and malaria. He thought that after Dr. Baruch shall have lived in New York as long as had some of the older residents at the present day, he would be less sceptical with regard to the large number of cases of malaria in this city.

Dr. HOLCOMBE did not know that he had, during over twenty-five years' experience in ear-diseases, ever seen a case in which the aural affection could be attributed directly to malaria. He thought malarial and aural affections happening in the same patient at the same time might be misleading, especially if we were disposed to accept the view that there were really cases of malarial otitis. He remembered that once, in conversation with Ricord, the latter was asked if he had ever known a case of syphilis to be cured. He replied that he had now been in practice about fifty years, and, while he could not say whether any of his cases had really been cured, he hoped to live long enough to be able to answer the question positively. So it was in malaria and ear-affections. The patients might have relapses, and it was difficult to say just how much the aural trouble might be due to malaria or bad drainage.

Dr. POMEROY, in closing the discussion, said he had been very careful not to bring theory into the consideration of the question. He had all the time been in the position of the investigator having but one interrogation-point before him, and that was, What is the truth? He had refrained from expressing an opinion. He thought he had wisely put into the title of his paper, "due to malaria or bad drainage," and not alone "to malaria;" and we were able to dodge around a good deal with that amount of latitude. It might be said that in many of the cases quoted there was a history of dampness about the dwellings, and there was an active cause of catarrh, and catarrhs with reduced health favored ear-affections. He did not believe that malaria would ever be put down as the direct cause of typical otitis. We might say, however, that inflammatory affections of the ear might be aggravated, in an indirect way perhaps, by malaria and sewer-gas. We might certainly say that painful affections of the ear were often aggravated, sometimes perhaps almost excited, by malaria and sewer-gas influences. But the question was a mixed one, and it seemed impossible thoroughly to unravel it.

THE MANURE NUISANCE.

Dr. A. HADDEN, of the Committee on Hygiene, reported concerning the manure-dumps along the East River front. Formerly the odor given off by these piles of decaying manure filled the atmosphere for more than a mile around. The question had arisen in the minds of many whether they were truly nuisances and detrimental to the health. Professors Chandler, Doremus, Draper, and others, had said the air was unhealthy to inspire, and the committee thought it was beyond a doubt but what they rendered the neighborhood insalubrious, although they hesitated to commit themselves to the belief that they might give rise to any specific form of disease. The manure was now being removed as fast as the present methods would permit.

Another nuisance was the periodical removal of the manure from the pit at the stable, which rendered the atmosphere of the neighborhood offensive. Several plans had been suggested for lessening the nuisance: one was to wash the material and use the straw for making paper; a second, to destroy it by rapid combustion; and a third, to compress it within barrels at the stables. The latter method seemed to the committee the most practical, and it had been adopted by certain of the stables in the city with excellent results. The manure so packed remained odorless and not detrimental to the health for a very considerable period of time. The method was by no means new, having been advocated by the public press years ago.

The conclusions at which the committee had arrived were, that the manure-dumps of this city were nuisances and highly detrimental to the public health, and all reasonable means should be used to entirely do away with them, and they recommended to the Society to insist upon the health officers adopting some feasible method, whether those suggested or others, to lessen the nuisance or to entirely do away with it.

Dr. JOHN C. PETERS said he had paid a visit to the manure-dumps that day, and the smell which he encountered was something to be remembered. What added to the offensiveness of the atmosphere was a sewer which carried the refuse of slaughter-houses, a fat-rendering establishment, besides other filth. It might be added, he said, that one of the largest oleomargarine-manufactories in the city was situated in close proximity to the mouth of this sewer, and received the full benefit of its sweet perfumes.

The report of the committee was accepted.

The ability of members, who proposed to continue to practise medicine, to resign from the county societies was doubted, and a motion was adopted requiring the *comitia minora* to report whether the law of 1880 repealed that of 1828, by which all legal practitioners had to be members of the county societies.

NEW YORK ACADEMY OF MEDICINE.

STATED meeting, February 5, 1885. The meeting was called to order by the retiring President, FORDYCE BARKER, M.D., LL.D., who introduced the following-named gentlemen occupying seats upon the platform: Dr. Parvin and Dr. S. Weir Mitchell, of Philadelphia; Dr. Shutuck and Dr. Chadwick, of Boston; Dr. Billings, of the U. S. Army; and ex-president Dr. Anderson.

On motion of Dr. C. R. AGNEW, an invitation was extended to Prof. Merriam, of the Columbia College, to lecture before the Academy, on the "Temple of Æsculapius."

Dr. BARKER then read his

RETIRING ADDRESS,

in which he said he would briefly recall the more prominent features in the history of the Academy during the period of his connection with it as presiding officer, and would make some suggestions relating to its future growth.

Since his connection with the Academy it had acquired a new and commodious hall, largely through the munificent donation of Dr. Abraham DuBois. But they were fast outgrowing this hall, as the library was nearly full, and had gained since 1879 about twenty thousand bound volumes and six thousand pamphlets. The circulating department contains about six thousand volumes. In the journal-room are between two and three hundred medical journals in all languages in which there is to be found a medical literature. The Academy was greatly indebted to Messrs. Wood & Co. and Messrs. Appleton & Co. for large donations of their new publications, and he suggested that it would be profitable for both authors and publishers to give to the Academy a volume of each of their new works.

The Academy had absorbed another very important organization,—The Medical Journal Association. He briefly alluded to the fact that nearly two years ago the Academy passed through the segment of a cyclone, and yet during the past year it had approached more nearly its avowed aims and high purposes than during any former year since it was founded. Four times as many papers had been offered as there were sessions at which to read them. The discussions on the papers had been chiefly by those familiar with the subject and specially prepared to make remarks, and thus the time of those present at the meeting was not wearily wasted in listening to crude, profitless, and digressive talk.

It was thought that the mortgage on the Academy of five thousand dollars would soon be raised. The Sections of the Society, with the exception of that on Obstetrics and Diseases of Women and Children, had not, it was to be regretted, done any scientific work. He hoped the time would soon come when the Academy could offer a home, free from expense, to such societies as the County Medical, the Pathological, etc.

The standing committees, with the exception of that on Medical Education, had faithfully discharged their duties. He thought the time was now ripe for the Committee on Medical Education to do important work towards the elevation of the standard of medical education. In this connection he referred to the subject of a State board of medical examiners, and asked if the demands of the most progressive members of the profession would not be satisfied if the Committee on Education of the Academy of Medicine were made a supervisory board of examiners for the medical colleges of this city. He then said that none but those who were well acquainted with the facts could appreciate the great advance which the medical colleges of New York had made during the past quarter of a century in teaching and in their facilities for imparting a thorough education in all departments of medicine. He also alluded in terms of highest praise to the good work done by the polyclinics of the city.

Dr. Barker then said that what the Academy requires in the future is a large fire-proof building, including room for a complete medical library, a large hall for its meetings, and others for smaller societies; a large room for a museum illustrating physiological and pathological anthropology, which should include a craniological series, a pathological series, and a series of sections and dissections, illustrating both topographical human anatomy and a comparative anatomical series; an anthropometric laboratory provided with the best means of measuring human bodies, the faculties, and everything cognate to these subjects, which should include a set of psychometrical instruments and everything pertaining to the series; a lecture-hall equipped with apparatus for lectures and demonstra-

tions of all kinds; a thoroughly-educated and trained pathologist, a capable mechanic, and a practical phonographer.

Although this was a broad scheme, the munificent gifts made to medical institutions recently by various wealthy persons gave reasons for hoping that it would be carried out.

ADDRESS OF DR. JACOBI.

Dr. ABRAM JACOBI, the newly-elected President, then took the chair and read an address, in which, after expressing his appreciation of the high honor conferred upon him and making remarks complimentary to the retiring President, he directed attention to some means by which the interests of the Academy might be promoted.

He thought it desirable that, instead of but one or two, all the Sections should begin to put forth some signs of active life. He also thought it desirable that the several medical societies of the city should meet in the halls of the Academy. It was hoped that the older members would not give up their duty in the Academy, thinking that the younger ones should take on their work. They should remember that the young man with wisdom and learning was often anxious to listen to the advanced in age, who had not only wisdom and learning, but also experience. He contrasted the means by which institutions like the Academy of Medicine in this country were supported with the means of support of similar institutions in Europe. Here the man who devoted attention to promoting the advancement of medical learning and the public health by labors in institutions devoted to science had also to keep up an active practice of medicine, a fact which did not permit him to forget the aphorism that the end of all medicine was the promotion of the public health. The time would come, he hoped, when all sanitary laws would bear the evidence of a consultation by our legislators with the medical profession. The President of the Board of Health would in time be chosen by the better part of the profession; indeed, the most improbable of all things would perhaps come to pass,—viz., the public would come to recognize the fact that the government of hospitals was not complete without a medical adviser in their boards.

"Medicine during the Eighteenth Century" constituted the main body of the address, and in his remarks Dr. Jacobi gave France the honor of the first position, which, however, it had since lost, and at the present time Germany stood in advance of all other countries in scientific medicine. It had been said that America had not produced a John Hunter or a Virchow; but all England had produced only one John Hunter, and all Germany only one Virchow. America had, notwithstanding, many names to which she could refer with pride, and not a few of them were associated with the New York Academy of Medicine. It could be said of the American practitioner that he had received, appropriated, and digested the results of foreign scientific labor, to which he had added his own. The state of medicine during the eighteenth century was such as to favor the development of homœopathy and other species of charlatanry which flourished so vigorously during that period. Finally, a school of pathologists sprang up, and this department of medicine so occupied the minds of medical men in Germany that the public were in a position, about the time of Rokitansky, in which they preferred the homœopath's pill-box to the pathologist's post-mortem case.

The time was, or rather now is, when a new theory in pathology could change the entire basis of etiology. It was unnecessary for him to explain that he referred more particularly to bacteriology. In this connection he referred to the pathology of Virchow. It was not his intention to make the present occasion one for eulogizing that eminent man, but he would say he was of opinion that bacteriology had too often to beg the question. His reason for referring to the subject at present was to suggest that the Academy should do its share towards settling the vexed question of the part played by bacteria in the production of disease. It is time, at any rate, that incapable authorities should cease to occupy our time with their discoveries of germs which they claimed to be the sole cause of this, that, or the other disease, but which were only to be replaced by the next coccus that might come along. We were willing to listen to such gentlemen as Koch and his compeers, who could wait until their views and discoveries were matured before they gave expression to them, but fifty thousand beginners in the studies of the microscope, like fifty thousand beginners in playing the piano, might become a noisy nuisance. He then mentioned some of the points of resemblance between the symptoms of chemical poisoning and those of infectious diseases said to be due to a peculiar germ, and expressed the opinion that it had not been by any means definitely proven that any given bacteria were the real cause of particular diseases. He said that he had but recently learned that four years before Semmelweiss had proclaimed the contagious character of puerperal fever it had been taught by our own anatomist, philosopher, poet, and Autocrat, Oliver Wendell Holmes.

In accepting the loving cup from the retiring President, he said an invitation would at another time be extended to the Fellows to participate in its pleasures in a more commodious hall.

Dr. CHADWICK then read a letter, directed to Dr. Barker, from Dr. OLIVER WENDELL HOLMES, who had been invited to be present; after which the Society adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held January 28, 1885, JOHN A. WYETH, M.D., President, in the chair.

ALTERATIONS OF TEMPERATURE DUE TO CEREBRAL LESION.

In the discussion on some specimens presented for candidates for membership, Dr. Seguin inquired of Dr. Janeway whether he regarded the rule of Charcot, concerning the significance of the temperature after cerebral hemorrhage, as true in practice.

Dr. JANEWAY replied that patients upon whom he had sought to test the rule had recovered, and he had consequently been unable to determine whether the symptoms had been due to hemorrhage or some other lesion within the cranium.

Dr. SEGUIN had not doubted the practical value of Charcot's statement until recently he had a patient who became affected with hemiplegia and aphasia, and it was found the temperature at first was depressed and afterwards elevated. Diagnosis of cerebral hemorrhage was made. The patient improved, but subsequently had another attack which ended fatally. Much to his surprise, he found at the autopsy thrombosis of the middle cerebral artery due to syphilitic endarteritis, and no hemorrhage.

MYXO-SARCOMA OF THE THUMB.

Dr. T. MITCHELL PRUDDEN presented the thumb of a man about 65 years of age, which had been removed for myxo-sarcoma, which had developed after the member had been stung by a wasp.

SALIVARY CALCULUS OF STENO'S DUCT.

Dr. E. C. SEGUIN presented a specimen obtained from a gentleman who was under treatment for specific hemiplegia. He was now in good general health; but a few days ago, without any apparent cause, the cheek began to swell in front of the parotid gland, and there was also swelling to be seen about the orifice of Steno's duct, from which a profuse amount of mucous fluid escaped. The next morning the patient found the calculus presented lying between the cheek and jaw, and the duct was diminished in size. A few years ago Dr. Seguin met with a similar case of calculus of Wharton's duct in a lady of gouty diathesis. There was swelling and an abnormal tenderness, and on introducing the probe into Wharton's duct it came in contact with a hard substance. Within a few days the calculus was thrown out spontaneously as in the case just related. It seemed somewhat remarkable that there could be spontaneous extrusion of calculi of so large size.

DIAGNOSIS OF KIDNEY-DISEASE AND PLEURISY.

Dr. BEVERLY ROBINSON presented specimens, and related the history of a case, which illustrated certain points of interest The patient was 44 years of age, and entered St. Luke's Hospital November 26, 1884, having, three days after exposure to wet, been taken with a chill, followed by fever and severe pain upon the right side of the chest. The expectoration became tenacious, and at times was stained with blood. The urine was of a specific gravity of 1013, but was in other respects apparently normal. Over the right lung posteriorly, as high up as the spine of scapula, was bronchial respiration; over the upper portion of the lung were bronchial râles; inspiration was imperfect. Over the base was resonance, but just above it was absolute flatness. The respiratory murmur was exaggerated over the left lung. The patient died on the 28th. At the post-mortem old pleuritic adhesions existed over the right lung. Near the right base was about a pint of purulent fluid. There was chronic diffuse nephritis.

One point of interest in the case related to the apparently normal condition of the urine, with the exception of low specific gravity, while marked kidney-lesions existed. Dr. Robinson said that in his experience this was not of infrequent occurrence. He regarded low specific gravity of the urine continuing for some time as of great diagnostic importance as pointing to chronic renal trouble, and said that one should be suspicious, when it was present, of kidney-disease, although the microscopic or chemical tests were negative.

Another point of interest was the difficulty of differentiating between pneumonia and pleurisy. The text-books, he said, were in error when they laid down as a general rule that in considerable pleuritic effusion there was always diminution and loss of thoracic resonance, or diminution and loss of vocal fremitus. The present case he thought was an exception to that rule. There was increase of vocal resonance and vocal fremitus at the base of the right lung, notwithstanding there was a pint of fluid found post mortem. Within three weeks past a man entered St. Luke's Hospital with increased vocal resonance and fremitus and marked ægophony over the right base, and yet on introducing the hypodermic needle no fluid was found. It was not until the third tapping that he obtained fluid, and then he withdrew a quart. After withdrawal of the fluid there was even less vocal resonance and fremitus than existed before aspiration was performed.

How are such cases to be explained? In the first place, it had been shown that the sound-conducting power of fluids depended to some degree upon their nature, and in some cases, more particularly in those in which the effusion was considerable in quan-

tity and had formed rapidly, the thoracic walls became distended perhaps more in proportion to the compression of the lungs, and in his opinion under these circumstances the thoracic vibrations before the disease would not be so intense as after a certain amount of the effusion had become absorbed.

Dr. JANEWAY remarked that about ten years ago he wrote an article giving some exceptions to the rules generally laid down by medical instructors. He had seen cases in which the vocal fremitus was preserved notwithstanding an increasing amount of fluid in the pleuritic cavity. Again, he had sometimes observed an error in not observing the exact point at which the vocal fremitus changed. He saw no reason why the vocal fremitus should be preserved over fluid unless the chest-walls were more resonant than usual.

As to the difficulty of diagnosticating kidney-lesions by examination of the urine, it was important to exercise care in searching for casts. Again, it was an error to suppose that because a patient had the signs of nephritis he was positively in a dangerous way. He knew of some patients who had carried the evidences of having atrophied kidneys for many years, in one case there having been albumen and casts in the urine for fifteen years. There were some cases of small kidney which troubled one to make the diagnosis because of absence of low specific gravity and increased quantity of the urine. In one instance which he recalled, the patient had gouty symptoms and obscure brain-troubles. Small granular kidneys were found, which had not been suspected. The urine had been examined from time to time, and was never known to be of low specific gravity.

Dr. Janeway was reminded by the President of a case in which a man passed urine containing albumen only after some degree of mental exercise or excitement, or after a bath. At all other times it was free of albumen. Dr. Janeway also recalled a case in which casts existed in the urine only after boxing. Several cases were on record in which temporary albuminuria existed without Bright's disease.

Dr. WALDSTEIN was acquainted with a family free from kidney-disease, in which for three generations temporary albuminuria existed after physical exercise.

ABNORMALITY OF THE BONES OF THE FOREARM.

The PRESIDENT presented a girl about 9 years of age, who was noticed always to carry the hands with the palms downwards, being unable to pronate and supinate them. It was believed on examination that there was fusion of the shafts of the radius and ulna. Dr. Wyeth did not remember that a similar case had been shown to the Society. A sister of the patient was normally developed.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, FRIDAY, JANUARY 2, 1885.

The President, R. A. CLEEMANN, M.D., in the chair.

DOUBLE UTERUS AND VAGINA.

DR. WILLIAM GOODELL described a case which had been sent to him on account of pain in the back, various nervous symptoms, and difficult coition. The vagina was double throughout its entire length. Entrance had apparently been effected indifferently on either side of the septum. The cervices were united like the barrels of a double-barrelled gun. There was a slight divergence of the upper third of the fundus. The sound entered three inches into each cavity. The septum vaginæ was divided up to the cervix, and her physician reports great relief to the general symptoms.

Dr. C. MCCLELLAND described a similar case. Pregnancy had progressed to the third month when the case came under his observation. The vaginal septum was complete. The external contour of the cervix was normal, but a thin septum, extending from the os to the fundus, divided the uterine cavity also into two parts. The prominence of the uterus was greater on one side of the abdomen. The sound was not passed. The vaginal septum was divided shortly before labor. A living child was delivered. About the third day after delivery, a mass, apparently of decidua, was thrown off after three or four hours of labor-pains. After involution was complete, sounds were introduced into the uterine cavities, and the handles diverged one and three-fourths inches. A second conception occurred afterwards on the other side of the uterus.

Dr. GOODELL some years ago had under his care a similar case, which he at first diagnosticated as an extra-uterine pregnancy, as he apparently found the uterus empty on passing the sound into it, while undoubted signs of pregnancy existed. The fœtal tumor was larger towards one side of the abdominal cavity, while the uterus was deflected to the other side. He saw the patient every two weeks, and made frequent careful examinations. He sent the patient to the University Hospital and fixed a day for operation. One day, while lecturing on the case, he had his hand on the abdomen of the patient and felt a contraction or a hardening under his hand. This so resembled the action of uterine tissue that he sent the patient to the Preston Retreat for observation. She was afterwards delivered spontaneously.

There was but one cervix, and one os, but there was a uterine septum higher up, dividing the cavity into two parts.

Dr. HARRIS remarked that the observer, in

these cases, is liable to be deceived because the enlargement of the uterus causes it to rotate, the empty half of the uterus admitting the sound in the median line. The uterus, too, is generally poorly developed, as this form of uterus is probably the result of arrest of development, and its thin walls do not give, to the palpating hand, the normal sense of thickness and resistance.

DOUBLE OVARIOTOMY WITH UNUSUAL COMPLICATIONS.

Dr. W. H. PARISH reported the following case. In September, 1884, I saw, in consultation with Dr. M. O'Hara, a lady who had been under his treatment for a number of months. She was 52 years of age, and of exemplary habits. The menopause had been established for a number of years, and she had enjoyed good health until a few months ago. In June, 1884, she noticed for the first time that her abdomen was enlarged. In July she consulted Dr. O'Hara, with symptoms of indigestion. In August the abdomen had become so enlarged as to occasion concern on the part of the patient, and she had submitted to an examination by him. About August 15, Dr. De F. Willard saw her in consultation with the attending physician, whose diagnosis of ovarian tumor was coincided in. On September 6, I saw the patient with Dr. O'Hara, and also diagnosticated ovarian tumor. The physical signs were the usual ones characteristic of ovarian tumor. There was distinct resonance in each flank, and no indication of fluid in the peritoneal cavity. The abdominal distention had become very considerable, occasioning no little interference with respiration, and was associated with slight œdema of the lower extremities and general emaciation. Removal by operation was urged upon the patient, but was positively refused. After the lapse of ten days I again saw her with Dr. O'Hara. The difficulty in respiration had so greatly increased as to prevent sleep except in the semi-erect position. But little nourishment had been taken, and exhaustion had correspondingly increased. In the erect position the pulse was 160 per minute, in recumbency 130. The abdomen measured 45 inches at the umbilicus. Its shape had changed since my previous visit. In the flanks there was distinct bulging, with fluctuation and percussion-dulness. I diagnosticated peritoneal dropsy as a complication of the ovarian cyst. The œdema of the lower extremities had increased. The patient had requested to be tapped, and it was with reluctance that I consented to resort to that measure.

On September 14, with the assistance of Drs. O'Hara and J. B. Roberts, I attempted to diminish the size of the abdomen by tapping the cyst, using for that purpose the ordinary trocar and canula. Only a few drops of thick, gummy substance were obtained. The cyst-contents were too thick, too jelly-like, to run through the canula. But a single puncture was made. The patient now gave her consent to the performance of ovariotomy.

September 16. The patient had been fed and stimulated as her condition demanded or permitted. Pulse 120, respirations 40, temperature 98¾° F. As yet there had been no apparent disturbance from the tapping.

September 17. Pain referred by the patient to the bowels; three movements, probably resulting from indigestion.

September 18. Operation performed. Condition previous to the operation: Pulse 130, respirations 40, temperature 99° F. Tongue dry and brown. Bowels moved twice during the night. Still had pain, supposed by the patient to be in the bowels. There were present Drs. O'Hara, A. H. Smith, J. B. Roberts, and McElroy. The patient was etherized by Dr. Roberts, and the usual incision along the linea alba was made. The tumor was found to be adherent to the anterior abdominal wall. An attempt was made to break up these adhesions, but the cyst-wall was so extremely thin that the cyst was soon torn. Its contents were too gummy to flow, and it was necessary to scoop out this substance with the hand. The contents had the consistence and appearance of calf's-foot jelly, and was adhesive like mucilage, sticking to the hand so that it was necessary to strip it from one hand with the other. There were numerous slight adhesions to the intestines, but, as the cyst-wall was so extremely thin, these adhesions were not troublesome, portions of the cyst-wall being left attached to the intestines. It was soon discovered that the cyst-wall had ruptured prior to the operation, and that every portion of the peritoneal cavity contained quantities of the colloid material and masses of dark, grumous blood. The contents had doubtless escaped gradually from a rent in the upper posterior portion of the cyst several days before the tapping. It was the presence of this material in the peritoneal cavity that led me to the diagnosis of the coexistence of peritoneal dropsy. There was no serum in the peritoneal cavity. Washing the peritoneal surface with water would not remove the colloid material, and it became necessary with hand and sponge to remove it from the under surface of the liver, from about the spleen and kidneys, as well as from among the intestines. After emptying the large tumor, it was discovered that there was a smaller one, about the size of a fœtal head, unbroken and without adhesions, and partly pressed into the pelvis by the superincumbent large one. The two tumors presented the same characteristics. They had thin, transparent walls, with numerous internal alveoli and thin septa, with gummy, colloid contents. About the base of each, but especially of the larger, there was a lim-

ited amount of solid substance. The pedicle of each was ligatured and dropped into the abdomen. Each tumor evidently grew from an ovary. The general peritoneum, wherever it could be seen or felt, presented innumerable cysts with walls and contents like those of the ovarian cysts. These peritoneal cysts varied in size from that of a millet-seed to that of a pea. Many of the larger ones were ruptured by the hand or sponge. These minute cysts were not aggregated in clusters with stem-like attachments to the peritoneum, but were isolated and had the appearance of blebs on the peritoneal surface. The peritoneum presented general injection of its capillaries, with slight roughening of its surface, but there were no evidences of active or decided peritonitis. The hemorrhage was but trifling, and but few ligatures were applied. The abdominal incision extended about an inch above the umbilicus. A glass drainage-tube was introduced at the lower angle of the wound, and the remainder of the incision was closed with silver sutures.

At the close of the operation the shock was not great, pulse 134. Morphine was given, and the patient passed a somewhat comfortable night. No vomiting.

19th. *Morning.* Pulse 138, respirations 34, temperature 100° F. *Evening.* Pulse 140, respirations 30, temperature 102° F. Vomiting a little, and abdomen somewhat distended. Face pale and features pinched. Three ounces of pinkish serum from tube. Vomiting checked by swallows of hot water and a mixture containing creasote and sodii bicarb. Tube washed out with carbolized water.

The *third night* was restless, with vomiting. Next morning, pulse 150, respirations 26, temperature 101¾°. Increased stimulants, and at noon pulse was 138, respirations 26, temperature 100⅜°.

Fourth night. Slept some, less vomiting. She took koumiss and retained it.

Next morning. Pulse 140, respirations 20, temperature 100 4/10°.

Fifth night. Pulse 120, respirations 22, temperature 101⅘°, stronger. Three ounces of a somewhat offensive fluid were taken from the tube; bowels were moved spontaneously.

Sixth night. She slept well. Pulse 114, respirations 23, temperature 101⅕°. Sutures removed, union complete. Tube slipped out and could not be again introduced. It left a canal with healthy granulating walls.

Seventh night. Vomiting returned. She did not receive the usual amount of stimulants during the night. Exhaustion and vomiting increased without additional rise of temperature, and she died on the ninth day.

The death was doubtless due to exhaustion. The disease of the ovaries and of the peritoneum was doubtless colloid cancer. The tumors and the material removed from the peritoneal cavity weighed fifty pounds. It seems right to conclude that, had the tumors been removed in their earlier stages, the patient would have most probably recovered from the operation and have remained exempt from the disease for months or years, or perhaps permanently.

Dr. MONTGOMERY spoke of the advantages of early operation before peritoneal involvement. He also alluded to the dangers of tapping. He gave a short history of a case of ovariotomy with colloid contents and recovery from the operation, but followed by death six weeks later from cellulitis and ascites, the cause being unknown.

Dr. BAER related a somewhat similar case, in which the patient recovered, but is now apparently dying from a recurrence of the disease in the upper part of the abdomen.

Dr. PARISH, in closing, said that the tapping was done with reluctance, but did no harm in this case. The peritoneal complication made the case hopeless.

OFFICERS FOR 1885.

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PHILADELPHIA COUNTY MEDICAL SOCIETY.

A STATED meeting was held at the Hall of the College of Physicians, January 21, Dr. R. J. Levis, President of the Society, in the chair.

The following report was received from the Committee on Hygiene and the Relations of the Profession to the Public:

THE MEANS TO BE TAKEN TO PREVENT THE SPREAD OF CHOLERA IN THIS CITY.

Modern research points to a living organism as the cause of epidemic cholera, a microscopic germ which enters the stomach of one attacked by the disease through the mouth and multiplies in the intestines, whence its progeny passes out with the stools, perhaps sometimes also with the vomit, but in no other way.

Cholera, therefore, must needs pass from one locality to another through the transfer of an individual sick with the disease, who distributes *per anum* and perhaps *per os*

the morbific germs, or the poison is carried in clothing or other stuffs soiled by the discharges from such an individual.

Further, it is believed that the cholera-germ can live and multiply for a certain time outside the body in the presence of decaying organic matter, especially that of animal origin.

Granting these premises, the direction to be taken to "stamp out" cholera is clear and unequivocal: strict attention to details alone remains to make success complete. A person stricken with cholera must be isolated and the germs killed as soon as possible after they leave his body; while, to make assurance doubly sure, the conditions for their living without the body must be eliminated.

The measures to be taken to accomplish the latter purpose will be considered first, since they may be resorted to first in order of time, before the disease has actually made its appearance in a given locality. They involve the removal of all decaying matters, whether vegetable or animal, so disposed as to contaminate the neighboring air or water. Here there will be occasion for much acumen and ingenuity in discovering hidden filth. Obviously, privies and cesspools must be cleaned thoroughly and disinfected; such disinfection may be accomplished by pouring down, for instance, several gallons of a solution of sulphate of iron (copperas), made of the strength of two pounds of the salt to a gallon of water. The plumbing of houses must be overhauled, to see that pipes are clean and traps secure. All refuse must be thoroughly removed from cellars, closets, garrets, stables, and back-yards; the whole house well scoured and freely ventilated.

Such details as these come under the ken of the householder and are to be looked after by him; but the municipal authorities have their part to do also in the frequent cleaning of streets, alleys, market-places, gutters, sewers, and docks; in the purification of the water-supply, and in the inspection of food, especially to prevent the sale of rotting and decayed vegetables and fruit.

Some sanitarians believe that with these and similar points thoroughly attended to, and nothing more, we might laugh at the approach of cholera in conscious security. But practically all these details will not be looked after: some will escape notice or be carelessly treated. Fortunately, there are other resources to call to our aid, especially when the cholera-germ actually manifests itself: the repressive means first spoken of, the isolation of the patient, and the immediate destruction of the germs after they have left his body. The destruction may be accomplished by receiving the dejections in a vessel containing some germicide, as, for example, a solution of bichloride of mercury (corrosive sublimate) in water, of the strength of two parts of the mercurial preparation to one thousand of the water, the depth of the liquid in the vessel to be two inches. The solution will be better if common salt is mixed with it in the same proportion as the corrosive chloride. It will be well to stir up the whole mass together and to leave the constituents some time in contact,—of course, outside the house. All soiled or even suspected clothing or other material about the patient must be soaked for some hours in another portion of the germicide solution, and afterwards boiled for further precaution. Or the dejecta may be destroyed by heat, as in the following plan: a sheet of paper is placed in the vessel to be used as a receptacle and covered with a layer of saw-dust; upon this the stools are to be received. Immediately afterwards a handful of powdered sulphur is thrown over the mass and the whole at once consigned to the fire.

Yet, with all these attempts at purification of surroundings and designs on the death of the wily microbe, some pertinaceous representatives may be in hiding to do their mischief upon the unwary. These must be circumvented by guarding well our mouths, the avenue by which, we have seen, the enemy enters the citadel. Be careful to drink no water from wells, springs, streams, or rivers near habitations and likely to be polluted, and, if doubt exist, boil the water before using it. Have all articles of food thoroughly washed in pure water and the cooking well done.

There is still another line of precaution. Experience has shown that cholera especially affects those who are suffering from disordered digestion, whether the result of mental causes, such as fear, anxiety, despondency, or following the use of irritating ingesta, as highly-seasoned food and especially alcoholic drinks. Therefore immediate correction of digestive disturbances, diarrhœa, etc., is to be recommended. Calmness of mind and temperance in all things should be the rule. Indeed, in the face of a severe epidemic, it would not be out of the way for the authorities to close all eating and drinking places after a certain hour in the day or early in the evening.

Finally, if attending on cholera-patients or in their immediate vicinity, wash the hands from time to time in the corrosive-sublimate solution, since they may have become soiled with the discharges, and the hands are apt unconsciously to find their way to the mouth.

(Signed) Richard A. Cleemann, M.D., *Chairman.*
J. F. Holt, M.D.
Horace Y. Evans, M.D.
John H. Packard, M.D.
James Farrar Stone, M.D.
F. B. Hazel, M.D.

Treatment of Hemicrania.—Where migraine is of a sympatico-spasmodic character, Finkenstein (*Wratsch*) recommends sodium salicylate, thirty grains, repeated in half an hour.— *Jour. of Nervous and Mental Diseases.*

REVIEWS AND BOOK NOTICES.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY. A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by JOHN ASHHURST, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-lithographs and Wood-cuts. In Six Volumes. Vol. V. New York, Wm. Wood & Co., 1884.

The fifth volume of this valuable work contains the following sections: Injuries of the Head, contributed by Chas. B. Nancrede, M.D., of Philadelphia; Malformations and Diseases of the Head, by Frederick Treves, F.R.C.S., London; Injuries and Diseases of the Eyes and their Appendages, by E. Williams, M.D., of Cincinnati; Injuries and Diseases of the Ear, by Albert H. Buck, M.D., of New York; Diseases and Injuries of the Nose and its Accessory Sinuses, by Geo. M. Lefferts, M.D., of New York; Injuries and Diseases of the Face, Cheek, and Lips, by Alfred C. Post, M.D., of New York; Injuries and Diseases of the Mouth, Fauces, Tongue, Palate, and Jaws, by Christopher Heath, F.R.C.S., London; Surgery of the Teeth and Adjacent Parts, by Norman W. Kingsley, M.D., D.D.S., New York; Injuries and Diseases of the Neck, by Geo. H. B. Macleod, M.D., F.R.C.S., and F.R.S., of Glasgow; Injuries and Diseases of the Air-Passages, by J. Solis-Cohen, M.D., of Philadelphia; Injuries of the Chest, by Edward H. Bennett, M.D., F.R.C.S.I., Dublin; Diseases of the Breast, by Thomas Annandale, F.R.C.S.E., Edinburgh; Injuries and Diseases of the Abdomen, by Henry Morris, F.R.C.S., London; and Hernia, by John Wood, F.R.S., F.R.C.S., London.

The present volume certainly leaves nothing to be desired. The articles are contributed by writers of wide reputation; they are in many cases complete in themselves, giving an admirable summary of the subjects upon which they treat. They are clearly written, and freely illustrated by cuts and chromo-lithographs. We cordially commend this work to the notice of our readers.

ARCHIVES OF OPHTHALMOLOGY. Edited by Dr. H. KNAPP and Dr. C. SCHWEIGGER. Vol. XIII., Nos. 3 and 4. G. P. Putnam's Sons, New York.

Nos. 3 and 4 of vol. xiii. of this journal are issued in one volume of 260 pages. The original articles, nine in number, are as follows: 1. A New Test for Color-Blindness, by Hilbert, of Königsberg. The test is "changeable silk," preferably "the red and green changeable, in which sap-green and purple threads cross at right angles." 2. A Case of Sudden Amaurosis followed by Homonymous Superior Hemianopia, by Dr. Th. Wiethe.* 3. Report of 1420 Cataract Extractions performed by Professor Rothmund, of Munich, by Drs. Everbusch and Rement. This paper is of interest to all cataract-operators, especially the references to after-treatment, antisepsis, etc. 4. Two Cases of Upward Strabismus, by Dr. Holmes, of Chicago. 5. A Case of Prolapse of the Vitreous through a Needle-Puncture of the Cornea, likewise by Dr. Holmes. Both of these papers are of practical merit, being records of rare clinical experiences. 7. A Case of Amblyopia from Menstrual Hemorrhage in Typhoid Fever, by Dr. C. Williams.* 8. Trachoma in the Negro Race, by Dr. J. Minor. Dr. Minor records six cases of trachoma in negroes. This contradicts the idea of the immunity of the negro race as regards this disease. 9. Cocaine and its Use in Ophthalmic and General Surgery, by Dr. H. Knapp.* This paper contains a summary of the literature of cocaine, including a translation of the original paper of Dr. Koller, in which he introduced this drug to the profession. The following 100 pages of the volume are devoted to a very full *résumé* of the progress of ophthalmology during the greater part of 1883.—H.

GLEANINGS FROM EXCHANGES.

AN ACHIEVEMENT OF THE PENNSYLVANIA RAILROAD COMPANY.—In a recent article on "Control of Vision," Dr. Jeffries, of Boston, calls attention to the entire failure in Connecticut and the partial failure in Massachusetts and in England to obtain efficient legislation to compel railroads to discharge employees with visual and aural defects. Dr. William Thomson, of Philadelphia, in a later article in the *Popular Science Monthly*, explains this failure, and shows how the Pennsylvania Railroad, alone of all companies, has succeeded in subjecting its employees to physical tests. The difficulty with attempts at legislation so far has been that the advocates of the tests would compel railway companies to have expensive examinations made by medical men, which examinations would result in a decimation and demoralization of the force. To the Pennsylvania Railroad Company and Professor Thomson belong the credit of devising and putting into practice a scheme by which the tests could be applied quietly, economically, and effectively. Dr. Thomson invented instruments for the examination of the color-sense, and of visual and aural acuteness, which could be used by any intelligent, instructed man. These instruments, together with rules for examining and recording the tests, were put into the charge

* These papers will be referred to in detail in the next report on ophthalmology in the Medical Times.

of instructed lay officials, who made the examinations and sent their reports to the surgical expert. If the latter found evidence of defect, a further opportunity for a more careful and full examination was given to the employee. If still found defective, he was, if possible, placed in some other position where his special defects could do no harm.

The ratio of those defective in color-vision among two thousand examined was four per cent., and that of those otherwise defective in vision or partially deaf was ten per cent. The Pennsylvania Railroad operates five thousand miles of track and employs about fifty thousand men, of whom about ten thousand are dependent upon color-signals for guidance. It may easily be seen, therefore, that it was no small task to attempt to eliminate the defective. Yet it has been successfully accomplished, and the general manager, Mr. Charles E. Pugh, writes in most positive commendation of the good results of the work.

Other railroads are now rapidly following the example of the Pennsylvania Company. They cannot, however, take away from it the great credit due to having so successfully applied a measure which cannot fail to be the means of saving lives and preventing injury. —*The Medical Record.*

MISCELLANY.

Meeting of the Medical Society of the State of New York.—The Seventy-ninth Annual Meeting of the State Medical Society of New York, held on the 3d, 4th, and 5th instant, was an unusually successful and harmonious one. The scientific proceedings and discussions appear to have been fully up to the standard, but the usual high pressure was experienced from the overcrowding of the programme. The most important action taken by the Society was the unanimous adoption of the report of the Committee on Legislation, which recommended the passage of an act by the State Legislature creating a State Board of Medical Examiners for the State of New York, containing essentially the same features as the bill prepared by the Medical Jurisprudence Society of this city, which we believe is now before our Legislature. The New York board is to consist of nine members, nominated by the Board of Regents of the University of New York, six to represent the State Society and three to represent other incorporated State societies in proportion to their membership. Of those representing the Society, three must have no connection with medical teaching and three are to be connected with the colleges.

If this bill succeeds in passing the New York Legislature, it will aid us very much in getting a State Board of Medical Examiners for Pennsylvania.

Medical Society of the State of Pennsylvania.—This body will hold its thirty-seventh annual session in the city of Scranton, May 27, 28, 29, 1885. As the programme of the meeting must be distributed at least one month prior to the meeting, all who desire to present papers at this session are requested to forward to the undersigned the title and a brief abstract of the same not later than March 15, 1885.

It should be remembered that no volunteer paper is allowed to occupy more than twenty minutes in reading.

Wm. B. Atkinson,
Permanent Secretary.

How to Make Home Attractive.—A husband separated from his wife in New Jersey on the ground of cruel treatment, because she sprinkled his underclothing with croton oil in order to keep him from going to the club and induce him to spend his evenings at home. The expedient was so successful that the wife imparted the secret to some other ladies, but the resulting endemic led to discovery of the trick.

NOTES AND QUERIES.

OBITUARY.

Edwin Samuel Gaillard, M.D., LL.D., died on the 2d instant, in New York, after a short illness. He was the editor and proprietor of *Gaillard's Medical Journal*, and previously of the *Richmond and Louisville Medical Journal*, which was started immediately after the war in the city of Richmond, Va. He was born in 1827, and graduated at the University of South Carolina and the South Carolina Medical College. Of late years his health was not very good, so that his whole strength was required for his editorial duties. Socially and professionally Dr. Gaillard possessed qualities that commanded esteem and respect; as an editor he was vigorous, aggressive, and able, and was successful in managing the publication of the *Journal*. He resided for a time in Louisville, Ky., before coming to New York, and while in that city was a member of the faculty of two of the colleges of Louisville.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 1, 1885, *TO FEBRUARY* 14, 1885.

Town, F. L., Major and Surgeon.—Granted leave of absence for twenty days. S. O. 14, Department of Texas, February 4, 1885.

Waters, William E., Major and Surgeon.—Granted leave of absence for one month. S. O. 24, Department of the East, January 31, 1885.

Wilson, William J., Captain and Assistant-Surgeon.—Ordered for duty as post-surgeon, Fort Preble, Maine. S. O. 27, Department of the East, February 5, 1885.

Woodruff, Ezra, Captain and Assistant-Surgeon.—Ordered from Willet's Point, New York Harbor, to Department of Dakota.

Taylor, Marcus E., Captain and Assistant-Surgeon.—Ordered to Department of the Missouri. S. O. 30, A. G. O., February 5, 1885.

Robinson, S. Q., Captain and Assistant-Surgeon.—From Portland, Oregon, to his proper station, Fort Spokane, Washington Territory. S. O. 20, Department of the Columbia, February 2, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MARCH 7, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE ON EPILEPSY.

Delivered at the Hospital of the Medico-Chirurgical College of Philadelphia

BY HUGO ENGEL, A.M., M.D.,

Professor of Nervous Diseases and Clinical Medicine.

C. F., æt. 28. Does not remember ever having any acute illness, though when a child about two years old he suffered from convulsions said to be due to teething. At fourteen years of age he enjoyed good health, except occasionally feeling very fatigued and depressed in the morning on awakening. He could not explain these peculiar sensations. He felt bruised all over, and upon two occasions an involuntary discharge of urine and fæces had occurred during the night. He thinks he had these symptoms about once every two weeks for a period of two years. Then he fell down one day unconscious, as if struck by lightning, and the bystanders told him later that they had noticed a peculiar distortion of his face during the attack. A few weeks later, while sitting at dinner with his family, he had another similar seizure. He fell from his chair and was unconscious for several minutes, but this time his whole body was convulsed with tonic and clonic spasms, for his very intelligent mother tells us that he first appeared rigid and stiff all over, his fingers were spread far apart, and then all his muscles worked in the most frightful manner. He has since had many such attacks: in all of them he lost consciousness and general convulsions attacked his muscles. These seizures still continue: they recur about once every three weeks. He informs us that he sometimes knows a minute before that the attack is near: a peculiar giddiness overcomes him, and his fingers seem to fall asleep. This numbness in the fingers gradually extends up both arms; when it reaches above the shoulder a dark veil appears to pass over his eyes, and he then loses consciousness. Occasionally, however, this prodrome, known by its technical term as *aura epileptica*, comes on without being followed by a seizure.

During the interval between the attacks he enjoys fair health, but he is positive that his memory is getting weaker, and he experiences daily less ambition and feels less and less inclined for business. His mother also says that his temper is changing: he becomes more and more of a morose disposition, is irritable and unsociable. After these attacks he is usually very sleepy, feels depressed and bruised all over, and generally lies in a heavy slumber for six to eight hours. A few times, however, he became very violent immediately after the seizure; he was so excited that his mother feared his becoming insane.

Regarding his family history, his mother suffers frequently from migraine, or sick headache, an uncle of his had the same attacks and died in one of them, and one of his sisters is said to be affected with hysteria.

Before I speak of the nature of his ailment, let me introduce two other patients to you.

A. M., æt. 11. Had measles, chicken-pox, and whooping-cough, but was otherwise well up to her seventh year, when, one day, while carrying a glass of water, she suddenly stopped in her walk, her eyeballs became fixed, the glass in her hand shook violently, a deadly pallor overspread her face, and she shut her jaws tightly with a snapping noise. All this lasted scarcely ten seconds, when her natural condition returned, and she continued her walk as if nothing had happened. She has since had many such seizures, at least half a dozen a year, and she is still subject to them. They overcome her at any time, and when the attack is over she has no recollection whatever of what happened. Neither are there any prodromes to warn her of the coming paroxysm. In some of them she squints, in others her face becomes distorted. Her mother suffers greatly from neuralgia; otherwise no neurotic tendency can be discovered in her family history. The little girl is well during the intervals, but is not very bright in school.

R. W., æt. 19. Had measles, scarlet fever, whooping-cough, and smallpox. When three years old had convulsions. At fourteen he had a peculiar attack, in which he was suddenly seized with a desire to break up everything, and would have done so had he not been forcibly restrained. This paroxysm lasted four hours. During the following two years he had three similar attacks. Then, one day, he used for the first time the opportunity offered him by his father's keeping a drinking-saloon to become drunk. While in this condition he became so violent that his parents thought of removing him to an institution for the insane. But the attack passed off rapidly, scarcely lasting two hours. He has, however, since had a number of them: they seem to come on every four months. During the interval he has an aversion to liquor and is a well-behaved and kind young man. His parents, as well as he himself, can predict the paroxysm about a day before. He becomes very much depressed in spirits, complains of sleeplessness, and is very irritable. But the attack itself sets in with lightning-like rapidity. He says that he feels an irrepressible desire for whiskey, and is certain that he would commit any crime, when in this

condition, to obtain it. Scarcely has he touched the first drop when a force within him drives him to acts of violence, and this force increases in the ratio in which he meets with obstacles in their execution. He exhibits during this time an extraordinary strength, is regardless of all consequences of his deeds, and has more than once felt a peculiar, uncontrollable desire to cut off the heads of other people. When the seizure is over, he has but a dim recollection of what has happened.

Gentlemen, all these cases are instances of the disease called epilepsy. When in the central nervous system such a permanent change has taken place as to give rise to convulsive attacks, during which the patient is either totally unconscious or loses at least the consciousness of his mental acts, we have the disease epilepsy. When but one such paroxysm occurs, or several of them when they follow in rapid succession, and when there is a local cause of irritation, on the removal of which the attack ceases (as the outbreak of a tooth in children), we name the disease *eclampsia*. In this there is no permanent change in the central nervous system. What the essential change is in epilepsy we cannot yet say. Often gross alterations are found, as asymmetry between the two hippocampi majores, or narrowing of the foramen magnum, or hyperæmia of the meninges of the brain; but these are either, like the last, the effect of the repeated attacks, or they may be, like the first two, primary causes producing the epileptic change. With a remarkable constancy in all thoroughly-investigated cases, a peculiar microscopic morbid change has been discovered in the medulla oblongata. This consists in a dilatation of the capillaries, in a degeneration of their coat, and in fatty degeneration of the nerve-fibres in the medulla oblongata. But, as this condition is the more developed the longer epilepsy has existed in the body, it may be presumed that it is due to the frequently-repeated disturbances of circulation of the brain induced by the seizures. Of late it has been demonstrated that a peculiar morbid change occurs primarily in the cells of the cervical sympathetic ganglia, and at present, until more definite proof can be given, we must consider this change as the underlying pathological condition of epilepsy.

Formerly many forms of convulsions were all included under the name of epilepsy. To-day, when a gross lesion of the brain, as for instance a tumor or hemorrhage or any other large effusion, or an embolus, or hyperæmia, gives rise to attacks accompanied by loss of consciousness and spasmodic movements, we name the disease such,—viz., tumor of the brain, cerebral hemorrhage, etc.,—and say that it is complicated or associated with epileptiform convulsions.

Recent researches have proved that a disease, to belong to the category of epilepsy, must have as an underlying pathological condition the permanent central change above mentioned; and that neither the coma nor the convulsions are essentially necessary to stamp the malady epilepsy. Accordingly, we have four varieties of this complaint:

(*a*) *Epilepsia gravior*, or *haut mal*, where the paroxysms are characterized by complete coma and general convulsions.

(*b*) *Epilepsia mitior*, or *petit mal*, where only loss of consciousness occurs, but no convulsions.

(*c*) Transition forms, where either of the two main symptoms of a seizure may be more or less present in the attack.

(*d*) Epileptoid states and irregular forms, where certain symptoms, as delirium, occur in paroxysms during which the patient is not aware of what he is doing, or where, after free intervals, the patient is suddenly seized with an irresistible desire to commit certain acts, generally of violence, of which he has no, or but a dim, recollection after the paroxysm is over.

To the last category belong cases of pyromania, kleptomania, and the on-the-spree-going cases of dipsomania, as our case R. W.; while A. M., the little girl, is a case of petit mal, and our first patient, C. F., a case where from petit mal the graver form, haut mal, gradually developed itself.

I will also draw your attention here to a fact observable in C. F. You saw that his face had a peculiar apathetic expression, evincing a faint resemblance to mild idiotism, accompanied by a pale, cachectic look of its own. This face, characteristic of all typical cases of epilepsia gravior, is called the "epileptic face," or, with the Latin name as a technical term, *facies epileptica*.

Generally we find a neurotic tendency in the family of an epileptic, and if the

disease is hereditary the offspring is apt to suffer from eclampsia during first dentition. In all cases we may have prodromata, or they may be absent. It rarely occurs to find remote warning symptoms; they then usually happen from one to four days before, and consist mainly in changes of the mental faculties. Immediate prodromata are met with in about half the cases. As I told you, they are known by the name of aura epileptica. Do not imagine that this aura must be a sensation as if something were blown at the patient, starting from some part of the human body and gradually creeping up until consciousness is lost and the attack begins. Any sensation whatever immediately preceding the paroxysm is an aura. These sensations, according to Nothnagel, may affect the motor, vaso-motor, or sensory sphere, or special senses, or any organ. Sometimes the patient feels a twitching in one group of muscles, or a sensation of numbness associated with paleness of the skin attacks one limb, or a peculiar pain anywhere in the body precedes the seizure, or the patient sees spots before the eyes, or hears strange noises, or rumbling is going on in the intestines, or gastralgia or palpitation announces the coming paroxysm. There is almost no sensation that may not appear as an aura epileptica. Vertigo, however, seems to be the most frequent. And it is by no means a fact that the same aura will always reappear in the same patient; nor is it true that the aura is always followed by a seizure, even in the same individual. At one time the aura is certain to be the forerunner of a paroxysm, the next time the attack will not come.

In haut mal, whether there is an aura present or not, the seizure itself is apt to be as sudden as a stroke. Scarcely ever has the patient time to take into consideration his surroundings and to select the position into which he is to fall. There are instances on record where a patient fell into a fire, or immediately in front of a pair of spirited horses, and I have myself seen a case, in the lower part of our city, where a woman, while ironing her wash, was seized by an epileptic fit while in the act of taking a fresh iron from the red-hot stove, and fell with one-half of her face upon the hot stove, utterly destroying one eyelid and the neighboring tissue. Often the patient utters a shrill cry, as Romberg said, "terrible alike to man and beast." The deep coma rarely lasts longer than from one-half minute to three minutes, though the time appears far greater to those witnessing such a fit. During this coma two periods may be recognized. During the first, the muscles are in a state of tonic spasm,r igid; during the second, clonic spasms show the by-stander the picture of the most fearful distortions.

When the attack is over, the patient usually opens his eyes as if awakening from a deep sleep, often mutters some words indistinctly, and then falls asleep, which sleep lasts from ten minutes to eight hours. He may then return to his normal state, or feel fatigued and bruised for some hours or some days, or evince an altered mental condition, becoming excited and even wild. But after at the latest four days he will return to his normal state. His memory, however, is getting weaker almost after every fit, a peculiar lassitude and apathy gradually developing more and more, the mental faculties also slowly undergoing a change, which finally, if the patient live long enough, is apt to end in the symptoms of softening of the brain or some form of insanity.

A patient seldom dies in an attack, and death from suffocation due to spasm of the glottis is one of the rarest occurrences: it happens, however, when many seizures follow each other without interruption. Occasionally death has taken place from a piece of meat or other food lodging in the trachea, the attack surprising the victim while eating. Other accidents, to which the patient is exposed by the liability of the paroxysm overcoming him in any position, may also bring about the fatal result. But most frequently we find intercurrent diseases of the lungs to cause the death of these patients.

In a considerable number of cases the attacks happen during the night. That a seizure of nocturnal epilepsy has occurred we may suppose when the patient feels very dull, fatigued, and sleepy in the morning without there being any apparent reason for this morbid condition, and when there is evidence of involuntary alvine discharges having taken place during the night. Our first patient evidently once suffered from such nocturnal attacks.

Diurnal epilepsy, however, is the far more frequent form of haut mal, while petit mal happens oftener during the night, though also rarer than in daytime.

Some cases of epilepsia mitior occur when the seizure is so mild that the patient, for instance while walking and speaking to a friend, simply stops talking for a second or two, but continues automatically his step. He is apt even to go on in the conversation where he interrupted it, and one not aware of the attack will notice it as little as the patient himself, who usually has no idea of what happened. Still, not all cases of petit mal are so mild; in some the loss of consciousness is complete, there is well-developed coma, and the patient falls down in any attitude and regardless of his surroundings.

Among the irregular forms we find all possible varieties. Nothnagel speaks of a case where the patient suddenly jumped up from a chair on which he was sitting, and ran about the room like a maniac for over a minute. He then again sat down, and, besides his feeling sleepy and tired, had but a faint recollection of what he had done. Sometimes the unconsciousness is so momentary in these forms as to appear not to be present, while spasmodic motions of some kind or other continue. When convulsions do not accompany these seizures the attacks generally assume peculiar manifestations of locomotion, as in the case of Nothnagel. Some will run around in a circle, others in one and the same direction, and still others run a certain distance and then stand rigid, so that the clonic spasms seem to precede the tonic, a fact at times also observed in haut mal. Any group of muscles may become thus affected; occasionally only squinting or distortion of the face, or violent flexion of one limb, constitutes the attack, with or without the coma.

The so-called epileptoid state, no matter what type it may assume, always evinces some mental change. The main points regarding diagnosis are the following. The seizures must come on suddenly, at most be preceded by an aura; they must recur a number of times without any symptom denoting an organic lesion of the brain or a mental disease being discoverable in the interval; in these attacks the patients must experience within them an irresistible desire, forcing them to commit certain acts which in their normal state they would never think of executing, would perhaps abhor, and finally, when the paroxysm is over, they must have no recollection, or but a dim one, of what happened during the seizure. We have an instance of this kind in our last patient, and most cases of pyromania, kleptomania, and dipsomania belong to this category. What peculiar shape such paroxysms may assume you will be able to guess from the following well-known instance recorded by Trousseau. An eminent judge in Paris, while delivering his charge to a jury, suddenly stopped in the middle of a sentence, went to a corner of the hall and there micturated in the presence of all assembled, then returned to his seat on the bench and continued the sentence where he had broken it off, not knowing what he had meanwhile done. I saw not long since an elderly lady who suddenly, in the presence of visitors, undressed herself, threw off all her clothing, and acted as if she were taking a bath. These attacks returned about once a month, and the only recollection she had of it was that she suddenly imagined herself to be standing before a bath-tub. What then followed she did not know until she found herself completely undressed.

In general, epileptics possess a strong muscular frame, though there are many weak and enfeebled individuals suffering from the disease. A large class of these patients appear to be ailing only during the paroxysms, exhibiting in the intervals the appearance of thoroughly healthy persons. This fact seems to prove that in true epilepsy we must never look for the morbid change in the nervous system at large, but in a localized spot, the medulla oblongata and pons, or primarily in the cervical ganglia. There are, however, patients who show disturbances in the intervals. Such manifestations may belong to the motor sphere, in which case they usually appear in the form of tonic or clonic local spasms, as for instance in cramps of the calf, or they may affect the sensory system, as headache, vertigo, confusion of the head, etc. In the majority of cases the mind is affected in the interval. According to Reynolds, one-third of all cases evince no affection of the mind; and that the disease may be present in persons with the highest intellect cases like those of Cæsar, Napoleon, and Petrarch prove but too well. Usually the morbid condition of the mind is of minor degree, weakening of the memory, as I mentioned before, being the most common symptom

of all. It is peculiar that epileptics have their memory enfeebled mainly as it relates to recent events, while they often remember very well facts which happened long since.

In some this loss of memory is but the beginning of the end: the mind becomes affected more and more, and the disease slowly but surely leads ultimately to complete imbecility. Griesinger, in speaking of this mental deterioration, says, "The memory decreases; the imagination grows dull; the fancy loses its richness of coloring, its intensity and warmth, and the spirit is withered. The physiognomy and bearing are altered, the lips of the patients grow thick, their features coarse, and they acquire a hideous expression of countenance. A final decline into imbecility is the sad destiny of many of these patients." Such cases do not give the least promise of a cure.

When we for a moment regard the causes that may develop such a deplorable state, we can only acknowledge our ignorance. The most careful investigations instituted by Reynolds have elicited the fact that neither the severity nor the number of seizures has the least influence upon the condition of the mind. Cases have been recorded where the patient had but three or four mild attacks in one year, and still imbecility set in with surprising rapidity, while, again, others just as numerous have been described where patients had during a period of ten and more years more than two thousand attacks of haut mal and still the mind continued perfectly clear. If the paroxysms have anything to do with the production of the mental disease, it is in the rapidity with which they follow each other. Persons who suffer from ten to twenty attacks within one or two days and then have no fit for a month or longer, when the same number of seizures again returns in rapid succession, seem more liable to a morbid mental condition. In those cases where haut mal and petit mal alternate with each other in the paroxysms, imbecility also appears more frequently.

These facts seem to indicate that genuine uncomplicated epilepsy, *toute même chose*, probably never exerts any influence upon the mind. Where imbecility complicates the complaint, we have perhaps to do with another malady accompanied by epileptiform convulsions. And I believe the same truth holds good with regard to other pathological manifestations which occur in the interval. When we consider that probably two-thirds of all cases of epilepsy not only evince no other morbid symptom of any kind (except perhaps a few, which, as headache, giddiness, change of temper, and moderate loss of memory, are directly caused by the often-repeated, sudden alterations in the cerebral circulation), but that they even continue in a remarkably good state of health until some accident or some intercurrent disease, as pneumonia or tuberculosis (which might have attacked them if they had not suffered from epilepsy), brings about the fatal end,—when we take this fact into consideration, I say, we cannot but conclude that true epilepsy is a disease *per se*, with no other manifestations besides the paroxysms, and that every case complicated by any of the phenomena mentioned is an instance of some other disease associated with epileptiform seizures.

Experiments instituted by Hitzig, Ferrier, Charcot, Brown-Séquard, and others have proved that we may always induce convulsions in an animal by irritation of almost any part of the cortex, but that we most frequently succeed in causing their appearance by irritation of some part of the motor tract. These facts agree with clinical observations. The most varied lesions have been known to give rise to convulsions, with or without coma. I need mention but two exactly opposite conditions,—great hyperæmia of the brain and intense cerebral anæmia as observed after profuse hemorrhages. We are entitled, therefore, to draw the conclusion that various, even mild chronic, lesions of the encephalon may produce by irritation that permanent excitability in the medulla oblongata which causes the epileptic attack; and if the irritation be often repeated, those permanent changes may take place in that important organ which we know are to be met with in all inveterate cases of epilepsy.

I have dwelt at such length upon this point because, in the selection of a profession or of any occupation, the question may arise whether the epileptic disease will gradually lead to imbecility. My answer is that in true epilepsy it probably never does, no matter how severe the paroxysms and how great their frequency, but that

this malady is also occasionally associated with abnormal conditions of the mind leading to imbecility.

Regarding treatment, many remedies have been recommended. You may read them in any book on nervous diseases. Concerning my own experience, I have found that the bromides, almost without exception, will lessen the frequency of the attacks, but rarely cure a case. Although a combination of the bromides of potash, sodium, lithium, and ammonium has been specially recommended by reliable authors, I cannot attribute a greater influence to them. Bromide of potash alone has given me the best result: where it failed the combination also did not succeed. I generally commence with twenty grains three times daily in some alkaline water. If this dose does not seem to influence the frequency of the paroxysms, I gradually increase it. If one drachm three times daily does not bring the desired result, I try one single dose at night; and I have to record one case where this change proved of decided benefit, while in others it has less effect than the administration of three daily doses.

Whenever the bromide fails, I have recourse to two other remedies, if the patient is willing to incur the risk attended with one of them. They are nitrate of silver and belladonna. Of the former I give first one-fourth grain three times daily, gradually increasing the dose to one grain, and to each pill I add gr. $\frac{1}{24}$ to gr. $\frac{1}{12}$ of extract of belladonna. I must admit that I have cured but two patients and improved about fourteen or fifteen with the bromide treatment, while three cases recovered under the use of the nitrate of silver and belladonna. One of them is still seized about once a year by a mild attack of petit mal,—*i.e.*, for a second his face assumes a blank expression and the attack is over. All three patients have a mild bluish tint in their skin. I have no case to record where the attacks simply lessened in frequency under this treatment, because patients either declined to become blue or did not persevere. I have tried all other remedies, electricity and water-cure included, but the result was *nil*. For curiosity's sake I will tell you of one case that recovered under my charge. In this case, a young man, æt. 26, I established a seton in the nape of the neck and kept the sore open for fourteen months. This is now about fourteen years since; the attacks never returned. For the first three or four years I made an issue in every case of epilepsy, but without obtaining in any other patient the slightest effect.

I will admit that the results of my treatment have not been very favorable, but they state the truth, and I think if every physician would conscientiously report the number of his cases and that of his failures, you might be surprised at the small number of cases of true epilepsy really cured.

We will administer bromide of potash to our three patients in suitable doses, and continue the treatment for a certain period as indicated, gradually increasing the doses if necessary. If the result is not favorable, we will propose to them the use of nitrate of silver; but, gentlemen, never omit to obtain first the patient's full consent to the procedure after you have made him fully acquainted with the discoloration of the skin to be expected, as you otherwise may make yourselves liable to a suit for damages.

507 Franklin Street.

ORIGINAL COMMUNICATIONS.

TRACHEOTOMY IN DIPHTHERITIC CROUP.

Read before the Philadelphia County Medical Society, January 21, 1885,

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In the following paper I desire to record briefly the histories of five cases of tracheotomy performed for the relief of respiratory obstruction consequent upon diphtheria, and to make some remarks upon the operation in this affection:

Case I.—On April 15, 1882, I was called to see James D., aged $3\frac{1}{2}$ years, an inmate of the Southern Home for Destitute Children, who at the time was under the care of Dr. Samuel F. Hazlehurst. The patient was convalescing from an attack of measles, when he suddenly developed marked croupous symptoms. When I saw the case, the symptoms of laryngeal obstruction being very urgent, it was decided to perform tracheotomy at once. Ether was administered, and the trachea was opened below the isthmus of the thyroid gland, and a tracheotomy tube introduced without difficulty: the child experienced immediate relief from his extreme dyspnœa, the respiratory movements

becoming quiet and natural. The day after the operation the case was doing well, but it was observed that the lymphatic glands below the jaw were much enlarged, and that an exudation had appeared upon the surface of the wound in the neighborhood of the tube. On the third day symptoms of respiratory obstruction again appeared. The tube was withdrawn, and attempts were made to remove the exudation from the trachea, without success. The tube was then replaced, but the child grew gradually worse, and died some hours later, with symptoms of increasing dyspnœa.

Case II.—On April 30 I was called to see Ella M., aged 5 years, an inmate of the same institution, under the care of Dr. Hazlehurst. The history of this child, prior to the operation, closely resembled that of the preceding case. When I saw her she presented marked symptoms of laryngeal obstruction, but, unfortunately, in this case much delay was experienced in procuring a tracheotomy tube, and when this was finally obtained the child was markedly cyanosed, very restless, and presented all the symptoms of dyspnœa in a most aggravated form.

She was put upon the table, and a small amount of ether was administered and the incision was made, but before the trachea could be exposed the respiration suddenly ceased and the pulse failed. The trachea was then hurriedly opened, and in doing this some of the thyroid veins were wounded and bled profusely: the tube was introduced, and artificial respiration was practised for some minutes, but the respiratory action could not be re-established.

In this case I think I erred in two respects: first, in not performing the operation sooner, —I should have opened the trachea, and depended upon keeping it patulous by means of retractors or sutures introduced through the edges of the trachea until I could have obtained a tracheotomy tube; and, secondly, in administering ether where the respiratory action was already so much embarrassed.

Case III.—On May 12, 1882, I was called to see Eddie M., aged 2 years, an inmate of the same institution, who was, a few days before I saw him, attacked with diphtheria, which was followed by symptoms of laryngeal obstruction. When I saw this case the respiratory obstruction was very marked, and the condition of the lungs seemed to indicate an involvement of the parts below the seat of the proposed operation.

Prof. Ashhurst, who kindly saw the case with me, thought it justifiable to open the trachea. The operation was accordingly done and a tube introduced, and the child obtained immediate relief from the urgent symptoms which he had previously presented, the respiration soon becoming quiet and natural. The child's condition for the next few days was very favorable, but at the end of a week it was noticed that fluids taken into the mouth escaped in part from the tracheotomy tube. This condition gradually improved, and on the fifteenth day after the operation the tube was permanently removed, and a week later the wound was entirely healed. A short time after this date the child began to exhibit signs of paralysis, and one morning, three weeks after the wound had entirely healed, on rising from his bed he fell suddenly backwards, and when the nurse reached his side she found him dead.

Case IV.—Mary Rischer, aged 6 years, born in Germany, was admitted to the Children's Hospital on the afternoon of June 11, 1883, with symptoms of dyspnœa, complicating an attack of diphtheria. Her condition at the time of admission was not threatening, and upon consultation with Dr. Morris Lewis, who at the time was on duty in the medical wards of the hospital, we decided to await the development of more urgent symptoms before resorting to tracheotomy, especially as the case could be under constant medical observation. During the succeeding night the symptoms of dyspnœa became so marked that I was summoned, and, as the child's condition had become very critical, with the assistance of Dr. Lewis and the resident physician, who administered a small amount of ether, I opened the trachea below the isthmus of the thyroid gland and introduced a tracheotomy tube. No trouble was experienced from hemorrhage, only one small venous trunk requiring a ligature.

After the introduction of the tube the child's color rapidly improved and the respiration soon became natural.

The improvement in this case was rapid and continuous, and the temperature had become normal by the eighth day after the operation, and the wound had granulated as far as the sides of the tube. The tube was removed at intervals and the child was allowed to breathe through the wound and mouth.

On the thirteenth day I removed the tube permanently, as the child appeared to breathe well through the natural passages. Two hours after its removal, while speaking, the child was suddenly seized with symptoms of respiratory obstruction, and, owing to the contraction which had occurred in the wound, some delay occurred in the reintroduction of the tube, and the child rapidly perished.

Case V.—Edwin W., aged 2½ years, was admitted to the Children's Hospital on the morning of June 13, suffering from laryngeal obstruction consequent upon diphtheria. This patient was sent to the hospital by Dr. William M. Welch, who had had the case under observation for a few days. The child, on admission, presented symptoms of dyspnœa in so marked a degree that it was decided to perform tracheotomy at once, as it seemed to afford the only chance of saving life.

In this case no anæsthetic was administered,

as the respiration was so much embarrassed. I exposed the trachea as rapidly as possible, although some delay was caused in displacing the numerous enlarged thyroid veins which presented themselves in the wound, and opened the windpipe below the isthmus of the thyroid gland, and introduced a tracheotomy tube. After the introduction of the tube the respiratory act ceased, and it was only by the aid of artificial respiration that it was finally re-established. A number of fragments of membrane were removed from the tube and were coughed up for some hours after the operation.

The case improved slowly after the operation, the temperature not reaching the normal until the nineteenth day.

The tube was permanently removed on the twenty-fourth day after the operation, and the patient was discharged from the hospital, with the wound entirely healed and in excellent condition, on July 28, 1883.

I have reported the preceding cases because I think it important to report all cases of tracheotomy done for the relief of respiratory obstruction consequent upon diphtheria, for until within a very recent period, in this country, the operation in this disease was looked upon with marked disfavor; but I am glad to say that it is now growing in favor with the profession.

The operation of tracheotomy, if carefully done, does not, in my judgment, complicate the case, but averts an immediate tendency to death, and offers a chance of recovery to a class of cases which, left to themselves, almost invariably terminate unfavorably.

The results of expectant treatment in these cases, where symptoms of respiratory obstruction are present, have been so unsatisfactory that the operation of tracheotomy, which in the vast majority of cases prolongs life, and is in itself seldom a cause of death, seems to be most clearly indicated.

It must also be remembered that the operation is not generally proposed until full trial has been made of the various forms of medicinal treatment which may be considered appropriate to the symptoms presented.

The statistics of this operation in diphtheritic cases are difficult to estimate, as in many of the collections of cases membranous croup and diphtheritic croup are used as synonymous terms.

Prof. Henoch, of Berlin, reports sixty-six tracheotomies for diphtheritic croup, with sixteen recoveries; a little over 24.3 per cent.

These statistics agree very closely with Prof. Cohen's observation, that one case out of four recovers when the operation is performed for diphtheritic croup. Mackenzie quotes Trousseau's statistics of four hundred and sixty-six cases of tracheotomy occurring in the Children's Hospital of Paris, in which one hundred and twenty-six recoveries took place, or about one recovery in every four cases. My own limited number of cases furnishes two recoveries out of five cases, though one perished ultimately from diphtheritic paralysis.

To form a correct diagnosis between diphtheritic croup and membranous croup is at times a very difficult matter. For instance, in Case I. the symptoms pointed to a false croup, which occasionally complicates measles, but on the day succeeding the operation the glands of the neck became greatly swollen and the tracheotomy wound was covered with a diphtheritic deposit.

The diagnosis in cases where the pharyngeal lesions precede the symptoms of dyspnœa is comparatively easy, except in the case of very young children, where a satisfactory examination of the fauces is often impossible.

I myself am a believer in the non-identity of the membranous and diphtheritic croup, but, as far as their surgical treatment is concerned, I can see that an exact diagnosis makes little difference; the same indications exist in both diseases,—namely, to relieve the dyspnœa which threatens life, and this is to be overcome by the same operative procedure.

As regards the age of the patient, there is no doubt that the chances of recovery after the operation of tracheotomy are better after the age of three years, but examples of recoveries in the second and even the first year are not wanting, and in my own successful cases the patients were aged two and two and a half years respectively.

The shortness of the neck, the depth of the trachea, the comparatively larger extent of its surface which is covered by the isthmus of the thyroid gland, the possible presence of the thymus body, and the danger of wounding the left innominate vein in very young children, are all elements which render the operation of trache-

otomy more difficult and cause its performance to be accompanied by more immediate risk than in the case of older children, where these conditions do not obtain.

G. Chaym* has collected a number of cases of tracheotomy in children under two years of age, and gives the following statistics. In fifty-six cases of children one year old, the mortality was eighty-four per cent.; in nine hundred and twenty-one cases where the age was two years, the mortality was eighty-five per cent. Archambault,† of the Children's Hospital of Paris, presents some statistics bearing upon the results of the operation at different ages:

976	cases in children	from	1–3	years	gave	104	recoveries.
822	"	"	3–4	"	"	175	"
736	"	"	4–5	"	"	174	"
467	"	"	5–6	"	"	148	"
547	"	over	6	"	"	198	"

The time at which the operation should be performed is a matter of the greatest importance. If we wait until cyanosis, coldness of the extremities, and extreme dyspnœa are present, it is often too late, so that I think it is generally conceded that it is advisable to operate when the local signs of laryngeal stenosis are well marked and are increasing, as will be shown by continuous stridor in the breathing and retraction of the supra-sternal fossa and the lower ribs.

But upon this latter point there is a wide scope for the exercise of individual judgment, some surgeons recommending the operation where others would consider it hopeless. Even the presence of pneumonia is not considered by some authorities as a contra-indication to operative measures.

The steps of the operation are too well known to require any detailed consideration. The question of the point at which the trachea should be opened, whether above or below the isthmus of the thyroid gland, is one which the surgeon should decide for himself, and, I think, depends somewhat on the size of the isthmus of the thyroid, and the ease with which it can be displaced upwards or downwards. The opening of the trachea above the isthmus of the thyroid gland is generally accomplished with more ease, as the trachea is more superficial at this point, and there is less risk of wounding important vessels, especially in young children.

In some cases where it is impossible to displace the isthmus of the thyroid gland, either from the extent of the trachea which it covers or its immobility, it may become necessary to ligature it on either side of the trachea, and expose the latter by an incision between the ligatures, which can then be accomplished without fear of dangerous hemorrhage.

The size of the tracheotomy tube to be introduced is a matter of some importance, and I think it is considered an advantage to use as large a tube as possible,—that is, one which closely fits the calibre of the trachea. This not only furnishes as much breathing-space as possible, but has less tendency to cause ulceration of the trachea, such as is occasionally seen after the use of loosely-fitting tubes.

The tracheotomy tube most commonly used is a double one, constructed of silver, and the outer tube contains a fenestra which is intended to communicate with the cavity of the trachea when the inner tube is removed; but in my experience it is generally useless as regards this object, for the fenestra is placed so far from the end of the tube that it is outside of the tracheal wound. For this reason the non-fenestrated tube recommended by Prof. Litble,‡ which is constructed of aluminium, and which has the advantage also of great lightness, seems to possess advantages over those in general use.

With the modification of the operation which has at various times been suggested of dispensing entirely with the tracheotomy tube, by removing a portion of the trachea or by holding the wound open by sutures introduced through the edges of the tracheal wound, I have had no personal experience, but as a temporary procedure I should think it might, under some circumstances, be adopted with advantage.

In very young children, when the trachea is very soft and pliable and presents very much the characteristics of a membranous tube, the use of the tracheotomy tube seems to me to be almost imperative, for I can recall one case of the operation in which I assisted Prof. Ashhurst, in a young child, in whom, as soon as the trachea was exposed and opened, inspiratory efforts caused a flattening of the trachea, so that no air could enter, and it was only after the introduction of the tracheal canula

* Medical News, August 2, 1884, p. 125.
† Archives of Pediatrics, June 18, 1884, p. 415.
‡ London Lancet, August, 1883.

that respiratory action was satisfactorily established.

The use of an anæsthetic in tracheotomy is recommended by many surgeons, among whom is Erichsen, who always administers chloroform, thinking that it relieves the spasmodic condition which is a factor in the dyspnœa; other operators prefer ether. For myself, I must say that I am opposed to the use of any anæsthetic, unless it be in the very early stage of the operation, and in cases which are not extremely urgent.

The use of ether in cases where the respiration is much embarrassed, I think, adds an additional complication by increasing the laryngeal irritation, and I am confident that in one instance, at least, I have seen death result from this cause; on the other hand, the sensibility of the parts is so much blunted that I believe little pain can be referred to the operation after the incision of the skin has been accomplished. The immediate results of the operation are, as a rule, most encouraging. The patient, who previously exhibited the most distressing symptoms referable to his extreme dyspnœa, now becomes quiet, improves in color, the respiration becomes slower and more natural, and he generally falls into a quiet and peaceful sleep; but, unfortunately, this period of comfort is, in many cases, in a few hours or days followed by an increased rapidity of the pulse and frequency of the respiration, with recurring dyspnœa due to an extension of the membrane into the trachea below the seat of operation, or to the development of a bronchitis or broncho-pneumonia. But even the occurrence of these complications after the operation, I take it, should not militate against operative interference in suitable cases, for they cannot be directly traced to the performance of tracheotomy, as they occur with corresponding frequency in cases in which medical treatment alone is employed.

A favorable sign after the operation is, as remarked by Prof. Cohen, the occurrence of coughing and expectoration of false membrane and tracheal mucus through the canula. The cases in which these symptoms exist are more apt to end in recovery than those in which the opposite conditions obtain.

The after-treatment of cases in which tracheotomy has been performed is a matter of the greatest importance, as the successful issue of the cases depends largely upon the care and watchfulness exercised in this respect.

The first indication requiring attention is the removal or escape of false membrane from the trachea. This may be coughed up and escape from the tube, or may be removed by a camel's-hair brush or a feather, and to prevent the inspissation of these discharges a warm and moist atmosphere is generally maintained. This may be accomplished by the use of the ordinary steam-atomizer, in which lime-water may be used as the spray, or by having water boiling in open vessels in the room, or by the slaking of lime in large quantities. In the Children's Hospital of this city we have a room especially arranged for the treatment of these cases, which is fitted with steam apparatus by means of which the air of the tracheotomy room can be filled with a vapor of steam in a few minutes and maintained at an even temperature.

It is also a matter of the first importance to have the case under careful and continuous observation for some time after the operation, for at any moment the tube may become obstructed by mucus or detached membrane, requiring the removal of the inner or even the outer tube. For this reason the presence of a trained assistant or a nurse skilled in the management of these cases is almost indispensable. Of the medical treatment of these cases I will say little, as much diversity of opinion exists upon this point, and the operation itself does not necessarily conflict with any form of treatment which may have previously been instituted. For my own part, I prefer the administration of carbonate of ammonium, in small and repeated doses, for the first twenty-four hours after the operation, believing that by its use the risk of heart-clot is much diminished.

The permanent removal of the tube is a matter of the greatest importance, and sometimes, I think, causes more trouble and anxiety than its original introduction. The time at which this should be attempted varies considerably in individual cases: it has been removed permanently as early as the third or four day; in other cases it has been weeks or months or years before this could be executed, and in a few cases its permanent removal has never been successfully accomplished. Many elements may

combine to render this an easy or difficult undertaking.

The importance of dispensing with the tube in cases of tracheotomy done for temporary laryngeal obstruction as soon as the cause has been removed is generally admitted. The bronchial catarrh, the danger of its displacement when competent assistance is not present to replace it, and the injury which it may inflict upon the trachea, all point to the importance of its early removal.

The growth of granulations in, and ulceration of, the trachea produced by the end of the tube, in cases where it has been retained for some time, have caused both troublesome and dangerous complications.

A case having a direct bearing upon this subject and presenting a rather unusual complication, causing death after tracheotomy, has recently been reported at a meeting of the Société Médicale des Hôpitaux de Paris by M. D'Heilly,* who showed the specimen taken from a case in which tracheotomy had been performed for diphtheria, and in which the patient died from hemorrhage on the twelfth day after the operation. The hemorrhage in this case arose from ulceration of the trachea which had extended to the innominate artery, and was caused by the end of the tracheotomy tube. The reporter states that he could find only two similar cases, which were recorded in Guy's Hospital Reports.

As soon as the patient can breathe without the aid of the tube, it is, of course, important to get rid of it; and to ascertain this fact its external opening may be plugged, or it may be removed and a wet compress of lint laid over the wound in the neck. If under these conditions the patient breathes comfortably, showing that the air passes freely through the trachea and larynx above the wound of operation, its permanent removal may at any time be attempted. The plan, which is recommended by many authorities, of removing the tube each day for a few days before its final withdrawal, and allowing the patient to breathe without its use for an increasing period of time at each removal, is, on the whole, a very good one, and one which I have generally adopted.

That the final removal of the tube need never be entirely despaired of is shown by numerous recorded cases, where, even after it had been worn for periods varying from three or four months to several years, its use had finally been dispensed with.

The difficulty produced by the removal of a tube which has been worn for some time is to be explained by several circumstances, among which may be included the healing of the external wound as far as the presence of the tube will permit, and its adhesion to the trachea, which causes it to assume a valvular action during the inspiratory acts. The growth of excessive granulations at the margins of the tracheal wound, or from the surface of the trachea impinged upon by the lower end of the tube, are also obstacles to the permanent removal of the tube until their destruction is accomplished by appropriate treatment. Another element which I think has a very important bearing upon this subject has been pointed out by Mr. Thomas Smith,† who has shown that tracheotomy, whether performed for diphtheria or acute laryngitis, is liable to cause undue irritability and disorderly action of the muscles of the glottis so as to interrupt their usual rhythm. This, perhaps, is the effect of enforced cessation of all exercise of function in the larynx which the operation entails.

Prof. Cohen‡ says that the explanation of these phenomena seems to reside in the fact that the laryngeal muscles had lost the habit of contracting harmoniously for the needs of respiration, the patients being somewhat in the condition of those with paralysis of the vocal cords.

In explanation of those cases where the tube can be dispensed with except during sleep, Smith suggests that the influence of the will may be necessary to regulate and secure the due action of these muscles, the perfection of whose movements has been impaired, and that on this account inspiration through the larynx during sleep is impossible.

To restore to their normal involuntary character the impaired functions of the disused laryngeal muscles, he recommends exercise of these functions during sleep, the removal of the tube, the case of course being carefully watched, so that upon the development of dangerous symptoms it can be reintroduced. By this means, after repeated trials in the most obstinate cases, the parts have resumed their normal con-

* British Medical Journal, May 24, 1884, p. 1017.

† Med.-Chir. Trans., vol. xlviii. p. 227.

‡ Cohen, Croup in its Relations to Tracheotomy, p. 53.

dition and the use of the tube has finally been dispensed with.

This condition I have seen to occur after the removal of tracheotomy tubes, and to cause the patient to exhibit the most alarming symptoms of dyspnœa until the tube was replaced. The unfortunate termination of Case IV. was, I think, due to this cause. Here, it will be remembered, the symptoms of dyspnœa came on suddenly two hours after the removal of the canula, upon the occurrence of some excitement, and quickly terminated in death before the tube could be replaced. In this case, after death, I introduced the tube without difficulty, and could find no cause of obstruction in the trachea.

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REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

DIABETIC ERUPTIONS ABOUT THE GENITALIA.

AS a supplement to the article by Kaposi on eruptions connected with diabetes, of which I gave an abstract in my last report (*Medical Times*, August 23, 1884), the following summary of a recent article by Fournier (*La France Méd.*, Nos. 31 to 35, 1884) is of interest.

Diabetic eczema has, according to Fournier, two characteristics: persistence and tendency to relapse. When acute in women, it is restricted to the vulva and immediate neighborhood; when chronic, the mons veneris, lower portion of the abdomen, hips, and groins may be involved. The symptoms are those of ordinary eczema with excessive thickening and infiltration of the tissues. The disease is excessively stubborn; without treatment it is permanent. The general treatment is based upon removal of the cause, the glycosuria; locally, warm baths, with or without the addition of starch, alkaline lotions, and powders of oxide of zinc and starch.

In men, erythema and eczema are the commonest forms of skin-diseases produced by diabetes. *Erythematous balanitis*, characterized by redness of the glans, is the simplest, earliest, and commonest of these affections. It is usually confined to the immediate neighborhood of the meatus, which is seen framed in an oval erythema, glassy, smooth, and turgid. A second form, generally consecutive to this, is *herpetiform balanitis*, which is characterized by the appearance of numbers of pin-head-sized excoriations on a red hyperæmic base, coalescing to form round or irregularly oval outlines, but without any initial vesicle as in herpes. A third type, more common than the latter, is *eczematous balanitis*, somewhat variable in aspect, but usually of the dry, desquamating variety. The epithelium is thin, cracked, broken, and desquamating, and its gray or white tint contrasts with the red ground of the glans: here and there the surface is fissured and bleeding or crusted. Often, besides the eczema, a whitish scurf is to be met, which under the microscope is seen to be a vegetable parasite resembling a saccharomycete. The prepuce, like the glans, may be involved subsequently. The characters of diabetic posthitis are first a rose coloration of the prepuce, then œdema, and later eczema. This is characterized on the cutaneous surface of the prepuce by a desquamation of small scales upon a hyperæmic base. On the mucous surface there is vivid redness and an eroded aspect due to a certain degree of epithelial exfoliation; there is also slight serous or sero-purulent oozing; and, last, on the level of the inferior ring of the prepuce, where the symptoms are most accentuated and characteristic, the lesions of eczema rimosum are to be observed, characterized by a circle of linear chaps arranged around the preputial ring like the spokes of a wheel. These chaps or fissures, which are the result of the inelasticity of the infiltrated prepuce, are produced whenever it is drawn back over the glans.

This eczematous balano-posthitis is almost characteristic in itself, but it leads on to another condition still more striking, *diabetic paraphimosis*. This is brought about by progressive thickening and infiltration of the prepuce, which becomes hard and leathery; diminution, then loss, of elasticity of the organ; and, finally, actual atresia of the preputial orifice. Sometimes preputial lymphangitis of chronic type causes the formation of nodules which might easily be mistaken for subpreputial tumors of another nature, such as vegetations, indurated chancre, or chancroid lesions. The preventive local treatment consists in the avoidance of contact between the urine and the integumen-

tum penis. When the disease is developed, alkaline lotions are used, with dusting powders, zinc, bismuth, talc, boric acid, etc. Where there is phimosis, these may be supplemented by local baths of mallow and elder, and above all frequently-repeated preputial injections, first with pure water, and then with medicated solutions, sodic carbonate or borate; if there is suppuration, nitrate of silver. The opposed surfaces of glans and prepuce should be kept separate by pledgets of absorbent cotton. Circumcision should never be practised unless the urinary sugar has completely disappeared. Gangrenous skin-affections of the genitalia are very rare; Fournier has never seen them in the female. (*Edinburgh Medical Journal*, September, 1884.)

SYMMETRICAL GANGRENE.

Lutz and Schultz (*Schmidt's Jahrb.*, Bd. 203, p. 27) give cases of this curious affection of the skin. The first was that of a man, 44 years of age. The patient, without having experienced any premonitory or general symptoms, observed, about the end of May, 1883, certain evanescent red patches on the back of the right hand, together with separation of the epidermis at various points in small, thin, black flakes, without leaving scars. Small red papules developed later on the same hand, which, in from twenty-four to thirty-six hours, changed to bluish-red blebs. These, after rupture, left slowly-healing, excavated ulcers. Towards the end of October similar blebs and ulcers appeared upon the left hand, without disturbance of the general health.

Examined by Lutz on October 29, similar lesions, with scars of former ones, were observed. Other lesions followed in relapses on both hands until the middle of November. Careful examination of the patient, a former brewer and great beer-drinker, of corpulent habit, failed to show any abnormality of lungs, heart, blood-vessels, or kidneys. Under the use of iodide of potassium internally, with dilute mercurial ointment to the ulcers, entire recovery took place.

Lutz remarks that the affection appeared to occur in two paroxysms, of which the first was preceded by general depression. There were no prodromal pains. The vaso-motor disturbance showed itself only as redness of short duration. There were no symptoms of spasm of the vessels, disturbance of the specific sensory nerves, or motor alteration. The gangrenous patches were highly symmetrical, corresponding almost precisely in location one side with the other.

Schultz's case was that of a woman of 25, suffering with "typhus" fever, who was prematurely confined of a dead infant and suffered from excessive loss of blood with collapse. During this time, towards the last of the collapse and high fever, the patient complained of pain in both legs, with a tingling and numb sensation in the feet. The lower extremities were swollen. On the external aspect of both legs were precisely symmetrical, bluish-black, finger-nail sized, round patches of superficial slough. On the left leg there was a similar patch, also on the inner side. There were no nervous or sensory disturbances. A day or two later some smaller patches of a similar character showed themselves on the outer side of both arms, as well as forearms. There was some alteration in the sensibility of the fingers, so that a needle could not be held. Objectively, sensation was not diminished. On the left breast was a finger-nail sized, gangrenous patch, while on the right two smaller, bluish-red patches could be observed. The patches on the left breast and on the right thigh became ulcerated and separated down to the adipose tissue, as if punched out. These patches were soon covered with granulations and cicatrized. In the less severely affected patches only superficial gangrene occurred. Pus was secreted under the skin, and gradually a crust was formed and the lesion healed. The asphyxiated patches on the right breast were not followed by any loss of substance, but the skin took on its normal appearance again when the circulation was restored.

According to Schultz, this case presents differences compared to previously recorded ones. The symmetrical character of the lesions, the absence of all spastic ischæmic disturbance, and the escape of fingers and toes from disease were all peculiar. Schultz thinks the cause lay in a pure neurotic disturbance occurring in an extremely reduced system. The symmetrical character of the lesions points to a disturbance of the trophic centres of the cord. Schultz regards his case as a true "tropho-neurotic symmetrical gangrene." All similar cases of symmetrical gangrene,

when not dependent upon external, chemical or toxic, embolic, and thrombotic influences, even if preceded by angiospastic ischæmic conditions, which, as dependent upon vascular spasm, are also of nervous origin, are to be regarded as neurotic symmetrical gangrene.

RED CHROMIDROSIS.

Le Roy de Méricourt (*Deutsche Med. Zeit.*, 1884, No. 27) reports the case of a boy of 12 years in whom a rose-colored eruption was observed on the skin in the right sub-maxillary region extending to the right side of the neck. The color was so marked that the boy's white collar was stained red. With a lens red granules could be perceived on and between the superficial layers of the epidermis. The day after the first examination certain irregularly-shaped bluish areas could be perceived on the periphery of this red portion.

YELLOW CHROMIDROSIS.

Dr. James C. White (*Jour. Cut. ana Ven. Dis.*, vol. ii. No. 10, 1884) reports the case of a blonde German of 20, who had noticed for six months that the left side of his shirt was constantly stained of a yellow color, not entirely removed by washing. He sweat profusely while at work, but not more on one side than the other. The patient was well, and did not experience any abnormal sensations. On examination the shirt was found stained of a bright saffron color on the left side from the shoulder down to the end of the flap. The skin presented no abnormal color. After keeping the patient under careful observation for two weeks, Dr. White directed him to rub in an ointment of salicylic and boracic acids. The trouble disappeared within ten days, and had not returned up to four months subsequently. Examination of the coloring-matter failed to give any clue as to its nature.

LEUCODERMA OF SYPHILITIC ORIGIN.

Under the name "leucoderma syphiliticum," Neisser (*Vierteljahrsch. f. Derm. u. Syph.*, x. p. 491, 1883) describes an affection characterized by the appearance of pigmentless patches showing themselves during the cure of the macular and papular eruptions. The patches have a whiter color than the surrounding skin and tend to grow on their periphery, sometimes approaching one another so as to form a sort of mesh-work of dark trabeculæ, among which the whiter patches can be seen.

The affection is found only in syphilitic cases, usually occurring on the neck, neighborhood of the shoulder, abdomen, and extremities, rarely on the face. It occurs at the end of the first and the beginning of the second year of syphilis, and usually lasts three or four months, although in rare cases it may last for several years. There are no subjective symptoms connected with it; medicine has no effect upon it; it is very much more common among women.

Leucoderma of syphilitic origin is to be distinguished from idiopathic leucoderma (vitiligo). The patches in the latter are much whiter and the borders darker; there is a transfer rather than a loss of pigment. The seat of vitiligo is on the face, hands, and genitalia, where the syphilitic affection is not found.

HIRSUTIES.

Cases of general hirsuties are so rare that the following of Fürst's deserves mention, though published more than a year since (*Virchow's Archiv*, xcvi. p. 357, 1883). The individual, a girl 9 years of age, was the ninth child of unrelated parents. The other children were normal. The middle of the forehead is free from hair; above it is a large bunch of hair. The brows meet in the centre. Cheeks, lips, and chin are covered with hair. The dorsal region shows more hair than the abdominal. The growth of hair in the lumbar region and in the sacro-coccygeal fold is particularly thick. The hair on the extensor surface of the arms is very thick, and about two centimetres long. The flexor aspect of the arms as well as the hands is free. The hair of the lower extremities, which is one and a half centimetres in length, stops abruptly at the ankles. The feet are free. The little girl was born with long hair on the head and heavy eyebrows. Now she is so clothed as to be completely hidden in her hairy growth. Dr. Fürst thinks the growth has now reached its full limit. The alveolar portion of the upper and lower jaws is enlarged to the thickness of one's little finger. The milk-teeth show no anomalies.

PSORIASIS PASSING INTO VERRUCA AND THEN EPITHELIOMA.

Dr. James C. White (*Am. Jour. Med. Sci.*, January, 1885) gives two cases in

which this extraordinary sequence of pathological process was observed. The first was that of a gentleman, æt. 27, who presented himself in 1866, suffering from a well-marked psoriasis scattered over the general surface, of six years' standing. He remained under treatment ten years, during which time all known remedies were employed without success. The eruption, which was always intolerant of local remedies, came and went, but never wholly disappeared from certain localities, as the scalp and backs of the hands.

Ten years ago several patches in the latter parts, and lower forearms especially, began to undergo a change, their bases becoming less hyperæmic and they themselves more elevated and less scaly, until they were gradually converted into sharply-defined, prominent, firm, and horny outgrowths, some of them resembling the unpigmented formations of keratosis senilis in the same localities, while others were more like callosities or some form of warts.

Three years ago a patch on the right palm became excoriated and fissured, and in spite of treatment terminated in a small ulcer. Later a similar one formed on the left palm. Repeated cauterization and scraping seemed to heal these ulcers for the time, but repeated relapses occurred, and both palms finally became much more largely involved. The axillary glands were at no time involved. The patient's health now began to fail under the pain and anxiety, and amputation was suggested. He then, by advice of Dr. White, consulted Hutchinson and Paget in London and Kaposi and Billroth in Vienna. The opinions of these gentlemen are not given. Finally, in April, 1884, the right hand was amputated above the wrist, and the fore- and middle-fingers of the left hand were excised through the middle of the metacarpal bones. The patient recovered from the operation and regained his former health and spirits. There was no return of the disease in other parts. Microscopic examination of the parts removed showed the characteristic appearances of flat-cell, epidermoid cancer.

Dr. White's second case bears in many respects a close resemblance to the first, save that no intermediate verrucous growth could be ascertained. He quotes a third case from Ziemssen's *Handbuch* (Bd. xiv., Hautkrankheiten), in which psoriatic patches were found to eventuate in epithelioma.

The lesson to be drawn from the study of these cases is that the transformation of patches of psoriasis into verrucous hypertrophy must be regarded as an ominous occurrence, and that the softening or other change of such horny growths demands thorough excision without delay.

MEDICINAL ERUPTIONS.

Bromide Eruption.—At a recent meeting of the Clinical Society (*Lancet*, November 1, 1885, p. 778), Dr. Carrington described a case of dermatitis from bromide of potassium, the patient being an infant, 10 months of age, to whom somewhere about eight grains of the drug were given daily for seven weeks. Part of the time the bromide of ammonium was given instead of the potash salt. The date of appearance of the eruption is not known. It showed itself in the form of minute red papules, which in the course of three or four days attained the size of a penny-piece. The parts affected were the buttocks, legs, thigh, and to a smaller extent the scalp and face. The smaller patches were of a bright crimson color and smooth, the largest ones of a dark brownish hue, circular or elliptical in form, with a sharply-defined edge at least one-eighth of an inch in thickness. They were of a spongy texture, without the least trace of fluid contents. The treatment given was half a grain of potassium iodide and one minim of liquor arsenicalis three times a day. In a fortnight there was very great improvement, and rapid recovery took place.

Antipyrine Eruption.—Antipyrine, now coming into use as an antipyretic, is a synthetic alkaloid belonging to the chinoline group, and apparently bearing some relation to quinine, though not as an antiperiodic. Of this medicine, Cahn (*Berlin. Klin. Wochens.*) reports that in one case he has observed as a result of its use an eruption of round, reddish, somewhat elevated spots, without subjective symptoms and disappearing on pressure. The rash was chiefly distributed over the back and extensor surfaces: the head, the palms of the hands, and the soles of the feet were not affected. The eruption disappeared as soon as the use of the antipyrine was discontinued, but returned when it was resumed.

Generalized Erythema from a Surgical Dressing containing Corrosive Sublimate.—Reichel (*Annales de Derm. et de Syph.*, 1884, p. 553) gives the case of a man who had undergone osteotomy for genu valgum, the lower limb being subsequently dressed with corrosive-sublimate gauze. For four days all went well. On the fifth there was itching and burning in the limb, which (the dressing being continued) spread to the abdomen and chest in the form of large erythematous patches and scattered papules. The neck and face were free. The skin at the seat of the dressing was violently inflamed and weeping. There were no fever, salivation, or other general symptoms. The eruption disappeared in a few days after removing the sublimate dressing.

DERMATITIS FROM THE LOCAL ACTION OF BICHROMATE OF POTASSIUM.

B. W. Richardson (*The Asclepiad*, October, 1884) says that while the skin in its normal state, the epidermis being intact, is insensible to the action of bichromate of potassium, if it be torn or abraded, however triflingly, by the prick of a pin for example, a sharp pain is felt on the exposure; and if the salt be left in contact with the wound the caustic character of the salt is brought out intensely, the cutaneous tissue is decomposed, and violent inflammation is established. These symptoms are accompanied with intense pain, especially in winter when the cold is severe. The action of the salt does not cease until the cauterization has penetrated to the bone. Workmen in factories are apt to suffer from ulcerations about the genitalia and elsewhere, resembling syphilitic manifestations. Such are the symptoms noted by French observers. Richardson himself reports several cases in which an acute dermatitis followed the exposure to watery solutions of the bichromate of not more than five or six per cent. strength. Workmen in chemical factories and autotype artists are most apt to be affected. The nasal mucous membrane may also be ulcerated. Colored photographic illustrations accompany the paper.

TREATMENT OF SKIN-DISEASES.

Application of Remedies in Collodion.—Barnes (*Am. Jour. Pharmacy*) finds that wood-tar dissolves in collodion in the proportion of 1 to 4. An alcoholic extract of coal-tar reduced to a syrupy consistence dissolves in the same proportion. Half a drachm of iodine is taken up by an ounce of this solution. For oil of cade the proportion is 1 to 5; for gurjun oil, 1 to 3–4; balsam Peru and oleic acid, 1 to 4; glacial acetic acid and crystallized carbolic acid, 1 to 4; creasote and essential oil of mustard, 1 to 7; extract of belladonna, 1 to 8. Aconitine, atropine, and hyoscyamine dissolve easily; veratrine, by the addition of a little oleic acid, and morphine the same, as by the following formulæ: ℞ Veratrinæ, gr. vii; collodii, ʒvii; acidi oleici, ʒi, M., or ℞ Morphinæ, gr. iv ad ix; collodii flexile, ʒvii; acidi oleici, ʒi. M. White precipitate, iodide of lead, iodide of cadmium, and sulphur dissolve (?) in the proportion of 1 to 7; oleate of mercury and oleate of zinc, 1 to 4. Iodide of sulphur cannot be employed in this combination, as it becomes decomposed.

Salicylic Acid in Urticaria.—Lassar (*Monatshefte f. Prakt. Dermatologie*, July, 1884) gives the case of an otherwise healthy man who for six years had been subject to sudden and severe attacks of urticaria, accompanied by feverishness and general malaise and without ostensible cause. The eruption was severe and general, even the mucous membranes being attacked.

Salicylate of sodium, in twenty-four grain powders, was ordered, to be taken the moment the symptoms appeared, and repeated at intervals of two hours until two more doses had been taken. Under this treatment the attacks were not only cut short, but reduced in frequency, none having occurred for two months at the time of the report.

Resorcin in Impetiginous Eczema of the Scalp.—Cattani found that under the use of resorcin ointments the crusts dried rapidly and disappeared, leaving behind a red, sometimes bleeding, surface if the resulting scale was torn off. A few more applications serve to remove all trace of the eruption. Cattani's formula is,—

℞ Resorcin, gr. 1 ad c;
Ung. petrolii, ʒi. M.

—*Monatshefte f. Prakt. Derm.*, 1884, p. 277.

Resorcin in Ichthyosis.—Andeer (*Monatshefte f. Prakt. Dermatologie*, 1884, p. 365) recommends a three-per-cent. ointment of resorcin for use on parts slightly affected with ichthyosis, while on the more severely affected parts he uses an ointment

of five to twenty per cent. strength, covering the parts afterwards with cotton batting.

Treatment of Seborrhœa Capitis.—Jackson (*New York Med. Record*), in an article on "dandruff," suggests general treatment when necessary with oil baths to remove any crusts, followed by the daily rubbing in of an ointment containing a drachm of sulphur to the ounce of vaseline. Another formula, suggested by Bronson, is the following:

℞ Hydrarg. præcip. alb., gr. xx;
Hydrarg. chlor. mitis, gr. xl;
Vaselin., ℥i. M.

A CASE OF MULTIPLE SARCOMA OF THE PERITONEUM SECONDARY TO SARCOMA OF TESTICLE.

BY CHARLES D. BENNETT, M.D.,
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ALBERT O., aged 25 years, born in Germany, was admitted to St. Michael's Hospital February 18, 1884. Patient had been perfectly well until six months ago, when he suffered for eight or nine weeks with malarial fever (?). Since then he has never felt well, has had alternating diarrhœa and constipation, and six weeks ago noticed a small swelling in the lower and left portion of the abdomen, which rapidly increased for two weeks, and has since remained stationary. During the four weeks preceding the first observation of the tumor, a dull, aching, and continuous pain was noticed a little below and to the left of the umbilicus.

At the onset of the fever, patient's left testicle commenced swelling, with some pain and tenderness and reddening of the scrotal integument, and continued slowly increasing in size for about ten weeks, then remained stationary until admitted to the hospital in the service of Dr. J. T. Wrightson. The pain and redness in the scrotum and the dragging pain in the left groin gradually ceased shortly after his fever had ceased. He denied all venereal disease. He had been under the care successively of two physicians, both of whom informed him that the tumor was his enlarged spleen.

On admission, the patient was well nourished; not cachectic, but rather pale in the face and the mucous membranes. Examination of the abdomen revealed a large tumor in the left lumbar and inguinal regions, smooth and firm to the touch, giving the impression of a sac greatly distended with fluid. The tumor was roughly bounded by a line running along the median line from the pubes to two inches above the umbilicus, then curving downwards and outwards two inches above and a little behind the anterior superior spine of the ilium, thence running downwards along Poupart's ligament to the pubes. Throughout this area, which was perfectly well defined, there was considerable prominence, marked dulness on percussion, and some slight tenderness on manipulation. The tumor was firmly fixed, did not move with the respirations, nor could it be moved from side to side by the use of any reasonable amount of force. By two of the staff it was thought fluctuation could be felt; but this sensation would probably have been more correctly described as elasticity,—much such a feeling as is conveyed by lightly compressing a toy balloon between the hands.

Between this tumor and the spleen, which was of normal size and in its normal situation, was over two inches of the ordinary tympanitic resonance of the abdomen, and a similar tympanitic area separated the tumor from the liver. There had never been much pain in the tumor, except at night when lying quietly in bed, and then none of any severity.

The scrotum presented a large growth about the size of a man's fist, egg-shaped, smooth, firm, elastic, freely movable in the scrotal tissue, and not at all sensitive to moderate pressure. The veins of the scrotum on this (left) side were much enlarged. The left testicle could not be found; the right was apparently normal. The left spermatic cord was not involved, and no connection between the abdominal and scrotal tumors could be discovered. This mass transmitted light feebly.

Both tumors were aspirated. In the scrotum the needle passed through a very thick and tough outer shell into a cavity, and ten or fifteen minims of a thick, glutinous, straw-colored fluid were withdrawn. In the abdominal growth no cavity was found, and the needle evidently penetrated solid and hard tissue, which held it firmly, and no fluid—not even blood—could be obtained. There had never been any obstruction to the bowels, no colicky pain, and the urine had always been normal in appearance. Its specific gravity on admission was 1019, and it contained no albumen nor casts. There were no constitutional symptoms, no fever, headache, nausea, nor vomiting; no emaciation, and, except at night, no pain.

February 28. Tumor evidently increased in size. Abdomen measured at umbilicus thirty-two inches. Still very little pain.

March 5. Tumor greatly enlarged, extending considerably past the median line; was more tender and quite painful. Girth of abdomen was thirty-three and three-quarter inches. Some tympanites. Examination per rectum revealed large smooth growths, quite firm and rather sensitive, in front and to the right of the rectum. One of these, pressed firmly, seemed to burst and disappear. No constriction could be felt. Patient showed his illness, was thinner, paler, and slept poorly.

March 10. Abdomen still increasing in size. The upper edge of the tumor, hard and nodular, could be felt distinctly running from the right of the median line towards the left, nearly to the spine. Excepting a narrow strip just below the ribs, the whole left half of the abdomen was dull on percussion. Patient had failed rapidly. He was very much emaciated and very weak, and, despite the morphine, was, on account of the pain, unable to gain much sleep. There was still no fever, although the pulse remained about 100.

March 13. On the 12th there appeared around the umbilicus a circular band of dull-reddish color, fading momentarily on pressure; apparently not erythematous, and more like a simple dilatation of the capillaries from obstruction. On this day the band was less regular, and seemed to be stretching out towards the right side, while the surface of the abdomen below the umbilicus was assuming a brownish hue, much the color of an old bruise. The superficial veins of the abdomen had been visible above the umbilicus for several days. The tumor of the testicle continued growing, and was at this time more than twice as large as when first examined, and was much softer, almost doughy.

March 14. Evidently some ascitic fluid had accumulated in the abdominal cavity. Obscure fluctuation detected. Pain continued very severe. Patient became discontented, and insisted upon going home, but towards night sank rapidly and before morning died.

At the autopsy the abdomen was much distended and contained considerable serum. The peritoneum was firmly bound down to a large subjacent mass, being especially adherent over the left side. An immense mass of new growth, incorporating adjacent organs, hard and nodular at its circumference, and containing many soft masses of sarcomatous tissue, filled the whole left half of the abdomen. These softened portions were, in the centre of the growth, pressed into one large broken-down mass of a dull reddish-brown or chocolate color, and surrounded a good-sized degenerated blood-clot. The tissue adjacent to this was on the point of suppuration, and was pointing toward the umbilicus, where the induration and the discoloration had been noticed before death. Many sarcomatous masses of various sizes were scattered through the mesentery, causing adhesions so as to make one mass of all the intestines and new growth on the left side. On the diaphragmatic surface of the liver was a similar deposit, about the size of a man's fist, and numerous small ones were scattered over the under surface of the diaphragm on both sides. One mass only, about the size of a pea, was found on the right pleural surface of the diaphragm. The left testicle was very much enlarged by a similar sarcomatous growth; its anatomical identity was lost, and its centre merely a mass of soft broken-down tissue. All the growths were about the consistence of brain-tissue. The left kidney had a small cyst in the capsule, and was adherent to the main mass, but not involved by the growth. All other organs normal.

A microscopical examination was made of one of the isolated growths on the diaphragm by Dr. Edward J. Ill, who found the tumor to be made up of large round cells, with a very small amount of connective tissue. The cells were, for the most part, arranged in long clusters somewhat resembling the tufts of epithelium, while scattered here and there were single round cells, with a few one-tailed cells.

Remarks.—The special points of interest in this case appear to be, 1st, the mode of origin; 2d, the mode of secondary infection; and 3d, the location of the secondary growths.

The man's illness began with irregular fever and the other signs of a mild orchitis, which, subsiding, left a testicle somewhat enlarged and indurated, but presenting no evidence of malignant disease. If from this point the patient had recovered, the diagnosis would have been simply acute orchitis. The patient did recover, save from his enlarged testicle, and the conclusion of the argument seems to be that this malignant sarcoma originated in a chronic hypertrophy of the testicle due to orchitis. There is no need of reminding surgeons how frequently benign growths become transformed into the most malignant tumors, or how some insignificant local irritation will become the focus of a wide-spreading malignant growth.

Erichsen ("Surgery," vol. ii. p. 569), writing of cystic sarcoma of the breast,—a disease essentially similar to the one under consideration,—says, "This form usually occurs as the result of injury or as the remote consequence of some inflammatory action during lactation." Curling ("On the Testes") considers the disease to arise from pathological changes in the rete testis, inducing dilatation of the seminal tubes.

Guthrie ("Commentaries on the Surgery of War," p. 540) records the following case: "A gentleman in perfect health was struck accidentally in the right testis by two shot while out shooting partridges. The shot lodged and gave rise to some uneasiness, and, after a time, to an enlargement which could not be distinguished from medullary sarcoma. I re-

moved the testis, and the wound healed kindly. The lumbar glands had, however, taken on the disease, and he died of their great enlargement and the general mischief which ensued within the year."

And at a meeting of the Pathological Society of Philadelphia (*Med. Times*, vol. viii. p. 475) Dr. Comegys Paul presented a cystic sarcocele of testis which originated in an orchitis fourteen years previous, and had been slowly growing all that time.

These quotations make it evident that the disease in this case may have originated as above suggested,—in simple inflammatory hypertrophy. The mode of secondary infection in sarcoma has been much disputed, but the general opinion seems to be that it is through the veins, and not by the lymph-channels. This case well illustrates this theory, for here in the testicle was a perfectly distinct and encapsuled growth, with no sign of glandular infection along the cord, in the groin, or, in fact, anywhere in the body. If the abdominal growth were secondary to that in the testicle (and it would be rather bold to assert that the two were perfectly independent of each other or had separate origins), then the conclusion is inevitable that the disease must have been transmitted through the veins, or we must deny a theory long since accepted,—that malignant disease transmitted through the lymph-channels first infects the glands nearest to the source of infection.

But when we consider the location of the secondary growths a difficulty arises. These abdominal tumors were strictly, with the one exception of the small pleural growth, confined to the peritoneum. Not a gland, lymphatic or digestive, not a single organ, not a single coil of intestine, was involved in the slightest degree. All the strength of the disease seems to have been concentrated on the serous membranes. Now, if we follow the blood-current from the testis through the left spermatic vein into the left renal vein, into the vena cava, through the heart, the first stopping-place would naturally be the pulmonary capillaries; and this, in fact, is one of the most frequent spots for secondary infection after malignant disease of the external portions of the body. But the peritoneum is entirely out of line of the circulation between the testis and the heart. If we consider the disease to be transmitted by the lymphatics, we are still unable to explain its limitation to the peritoneum, for the lymphatics from the testicle pass through the lumbar glands directly to the receptaculum chyli, and this sac and the thoracic duct showed no signs of disease. But considering the peritoneum as a large dilatation of the lymph-channels, we might suppose that the sarcomatous particles had filtered through the intervening glands, and had escaped into the comparatively open space of the peritoneum, and there implanted themselves on various points of the peritoneal wall. This view would explain the isolation of the growths, which did not increase by extension, but sprang from tissue apparently perfectly healthy, and resembled small mushrooms with their slender pedicles and larger overhanging tops, and would also explain the small growth on the right pleura.

So it would seem from this case, although the exact track followed by the infecting particles cannot always be demonstrated, that malignant disease may sometimes leave the adjacent glands unscathed and invade distant parts, even those outside of the direct blood- or lymph-channels.

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A CASE OF MORBUS MACULOSUS WERLHOFII, COMPLICATED BY MENORRHAGIA.

BY HENRY M. WETHERILL, Jr., M.D.,

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UPON the 13th of July, 1884, the writer was called upon to visit Mrs. C., aged 44 years, the mother of three healthy children, and elicited the following facts. She had always considered herself a healthy woman, but never robust; never had much color. She had not the hemorrhagic diathesis, nor had there ever been a bleeder in her family, neither upon her father's nor her mother's side. When she has received trifling cuts, they did not bleed immoderately and soon healed kindly. None of her people had ever been attacked by scurvy. Neither the woman under consideration nor her mother had ever had menorrhagia or post-partum hemorrhage; their labors have been natural and their menstruations very moderate in amount, indeed sometimes scanty, but very regular. The subject of these remarks is the wife of a small farmer, and has always had to perform laborious household duties. Within the past three months she had been obliged to work harder than usual, and in consequence had

become rather anæmic and debilitated. Forty-eight hours prior to calling me in there had suddenly appeared, *without prodromal symptoms*, small petechial spots, thickly scattered over her trunk, neck, and limbs, the extremities and the head and face not being at first involved. The following day she began to lose blood freely from the mouth, that fluid oozing from the tongue, gums, and mucous membrane. As yet no epistaxis, no bleeding from any other locality. Of late her diet had been a fairly generous one, comprising both fresh and salted meat (but no excess of the latter), vegetables, and fruit.

Upon inspection, the entire mucous membrane of the mouth and the gums was found covered with crusts of partly inspissated blood, the latter oozing freely from beneath. These being removed, the mucous membrane and gums appeared absolutely healthy, and the teeth were firm. The gums were neither swollen, spongy, nor eroded, nor were there any signs of hemorrhagic inflammation present. No history of painful tumefaction of the articulations, no cases of scurvy in the neighborhood. Of a dozen people living in the same and in contiguous dwellings and under similar conditions, this woman alone was affected.

Although the case lacked many of the distinctive elements of scurvy, the patient was ordered an acid citrate of quinine and iron, the juice of three lemons daily, nourishing and easily-digested diet, and complete rest in bed. From this time to the 19th of July her condition remained unchanged, save that the bleeding from the mouth was somewhat diminished and the petechial spots had appeared abundantly upon the face. Temperature 98°, pulse 86, fair in strength, respiration 20. Heart and lungs sound, liver and spleen normal in size, digestion fair, appetite variable, bowels regular. No constitutional symptoms.

Upon the above date suddenly appeared large, round, purplish, hemorrhagic extravasations, varying in size from that of a twenty-five-cent silver piece to that of a silver dollar. These were about fifty in number, were flat, painless on pressure, and not surrounded by a "rosy halo," and were scattered over the limbs and trunk. Upon their appearance the bleeding from the mouth ceased. As she expected to menstruate in a week, I admonished her to remain in bed, and added to the treatment Squibb's fluid extract of ergot, gtt. xxv ter in die.

The patient took the medicine irregularly, felt so well that she refused to remain in bed, and resumed her household duties. Upon July 21, four days in advance of the expected time of menstruation, she was seized with menorrhagia, which within a few hours became a free hemorrhage. She went to bed. The acid citrate of quinine and iron was stopped, and the ergot increased to gtt. xl, with tr. ferri chlor., gtt. xij every third hour. Kept her lightly covered, and elevated the foot of the bed. Later on the same day, the hemorrhage continuing, I tamponed the vagina. Occasionally she fell into syncope. Used brandy and ammonia freely. Extremities cool. Temperature in mouth 97°; pulse 120, very small; respirations 24; sighing and yawning; great thirst. This tampon checked the flow for a few hours, when the blood began to flow through it and it was replaced by one saturated in Monsel's solution of iron. This held, and gave her a chance to rally. By this time the mattresses were saturated and the blood was dropping through upon the floor. For a week following the patient had several exhausting hemorrhages from the mucous membrane of the genital tract, and also lost blood from the bowel and bladder. The urine drawn by the catheter was red with blood. From its first appearance it had none of the characteristics of menstrual blood; it was very fluid and bright red. Both this and the clean blood which flowed from the bowel were repeatedly examined microscopically. That first seen was apparently normal,—no diminution of red corpuscles, no excess; normal in their relation to the number of leucocytes,—but as the patient became exhausted the solid constituents of the blood diminished and the leucocytes were relatively increased in number. As the blood became thinned the red blood-corpuscles seemed to imbibe the serum; they swelled, and to a great extent lost their bi-concave form. From the first bleeding this blood was *non-coagulable*,—was very *poor in fibrin*.

At a time when the anæmia was most profound, fever set in and continued for six days, the temperature under the tongue ranging from 99° to 102°, with but little variation between morning and evening. This was the "fever of deprivation," so commonly seen in the surgical wards of a hospital after exhausting hemorrhage.

The temperature became normal as the patient began to make and to retain blood. There appeared several successive crops of petechiæ, and after each there appeared new ecchymotic spots, the old ones gradually fading from purplish to green and to a yellow color. The neck and face were not invaded by the latter. It is quite reasonable to infer that the hemorrhagic process involved the mucous membrane of the bowels, as preceding each loss of blood from the anus there occurred violent paroxysms of abdominal pain, with retraction of the abdominal walls. This condition was but partially relieved by the free, local, hypodermic use of morphia.

The convalescence of this case was gradual, owing to the immense drain and shock of the system; but there *was no relapse*. In about six weeks from its appearance she was able to walk. She has been kept under ob-

servation ever since, and has been quite well, the menstruations occurring regularly and being moderate in amount.

This case is instructive, as it involves the points of differential diagnosis between scurvy, hæmophilia, and morbus maculosus. The suggestion of the existence of scurvy is at once set aside upon making a critical inspection of the case. Nor is it worth while to dwell here upon the elements of difference: they are apparent. The point to elucidate is the plain difference which exists between morbus maculosus and hæmophilia. The former is an *acquired* and *transitory* hemorrhagic condition, occurring *sporadically*, and of *brief duration*, *obscure in etiology* and *spontaneous* in development. The latter may be defined* as "a *congenital* and *habitual hemorrhagic diathesis*, since the extremely dangerous and obstinate hemorrhages for which bleeders are noted usually begin in the very *earliest* years of life and recur habitually."

Morbus maculosus occurs much oftener among females than among males, while the reverse is true of hæmophilia.† Nor is there lacking sound reason for this. In those families whose members are bleeders comparatively few of the women succumb to hemorrhage, as, since this disease involves a condition of plethora, the females have in their menstrual periods a salutary depletion of their habitually overfilled vessels. In morbus maculosus the bleeding suddenly occurs without marked, if any, prodromal symptoms. In hæmophilia, those cases which are not distinctly fluxionary in character, the sequel or accompaniment of a plethoric state, are *traumatic* in origin. In the latter disease the ecchymoses are surrounded by a rosy halo or areola of congestion and are tender and painful to the touch, and actual blood-tumors appear. This is not true of the former.

In hæmophilia the vessels, great and small, are found to be thin-walled, in some instances quite translucent, when normally they should be much less so; and so brittle are they, owing to tenuity and to fatty degeneration of their muscular coats, that the ligature cuts them through. The blood in hæmophilia, save when the subject is in a state of profound anæmia from hemorrhage, shows a large *preponderance of red blood* corpuscles and *of fibrin*, and a poverty of leucocytes. In morbus maculosus the vessels remain in an apparently healthy state,—*i.e.*, there are neither gross nor microscopic departures from the normal. While the blood in some cases seems normal, in others it has been found (upon the authority of Legrand, Rayer, Biett, and Becquerel) that the plasticity of that fluid was very much impaired, owing to the poverty in fibrin.

Here, then, are exactly opposite conditions of the blood and the vascular system in these two diseases. Observe that in the case of this woman the blood from the very first bleeding failed to coagulate, and continued so until the attack passed off. Her blood then resumed its plasticity. Enough has been said to demonstrate that, while these two diseases and scurvy may conveniently fall into the same general division in the works of medical writers, they are distinct diseases, dependent neither upon similar conditions of the vessels nor upon the similar state or altered composition of the blood. In fact, they resemble each other in the one bare circumstance that in both conditions there is an escape of blood.

Now, as to treatment of morbus maculosus no rules can be laid down: even suggestions would probably prove futile and misleading. I cannot think that I benefited this woman, save in the moral effect of my presence and encouragement, by the drugs administered internally during the inception and activity of the attack. It was a fortunate circumstance that the blood, although very poor in fibrin, contained sufficient of that compound to be coagulated finally by the Monsel's solution in which the tampons were soaked. Every time they were changed, which was every forty-eight hours, the blood flowed in a stream. After all bleeding had ceased I have reason to believe that tr. ferri chlor., gtt. xx t. d., and quinine, gr. viij daily, with free use of brandy in milk, were of material benefit to her.

Fortunately for the public, this disease is of rare occurrence, and probably but few cases are noted in this country within a year; but I should be exceedingly glad to learn more of this singular affection, and would be obliged to any of my professional brethren for further enlightenment upon this subject.

* Ziemssen's Cyclopædia, vol. xvii. p. 13.
† Ibid., pp. 21, 22.

TRANSLATIONS.

VACCINATION DURING THE INCUBATION OF VARIOLA.—The mean duration of the incubation of variola is from eleven to twelve days. It seems to be shorter in the hemorrhagic form, then lasting but six or eight days, except that in the latter case the variations of its duration are simply *en rapport* with the gravity of the case. The beginning of the incubation is not prevented or its progress modified by the presence of the preliminary fever. Vaccination subsequently performed may prevent or modify the eruption. It is doubtful if at this period contagion may be conveyed by the atmosphere, but from the beginning of the first stage the disease may be transmitted by inoculation. This last event presents itself particularly in the event of epidemic variola. To avoid it, it is preferable to use only *animal vaccine*, and one should abstain from vaccinating from arm to arm. It is better to collect the vaccine and not use the product until fifteen days after. Not only does vaccination prevent the spreading of smallpox, but it operates at the same time in a way to modify the eruption and to reduce the disease just as well after infection by variola as during the incubation. The result is often variable. It is often almost useless when the vaccination has been made only three or four days previous to the reception of the poison of variola, and it is therefore better that one should commence it a longer period before the outbreak of the fever. When this last has made its appearance, it is necessary to have recourse to inoculation; for, no matter by what process protection is attempted, whether by scarifying or by subcutaneous injection, the progress of the disease and the gravity of the attack of the patient will be in no wise modified.—*M. Venay*, in *Revue de Médecine*, November, 1884. P.

PELLETIÉRINE AS A TÆNICIDE.—Dr. Schroeder, in the *Archiv für Experimentelle Pathologie und Pharmacologie*, December, 1884, contributes a paper on the action of this drug as an anthelmintic. He concludes that a good anthelmintic must be destructive to the parasite and not injurious to the patient using the remedy. It must not be neutralized in the stomach, but must reach the intestines in a condition to destroy the parasite. As far as the danger to the patient is concerned, it has been proved that pelletiérine is comparatively harmless, whereas the poisonous operation of this drug upon the tape-worm has been demonstrated by therapeutic experiments. It is seldom that experiments can be made on living tape-worms of the species that usually infest the human subject outside the body, but Dr. Schroeder has experimented with *Tænia serrata*, the tape-worm of a cat. The worm was taken from the bowel of the animal just after it had been killed; the worm was then placed in a solution of salt and warm water, where for some days it lived, moved about, and seemed to be in a normal condition. A solution of 1 : 1000 of pelletiérine was added, and in five minutes the movements of the worm ceased. It was then placed in another solution of warm water and salt, and in fifteen or twenty minutes its motion recommenced. It was again placed in the solution of pelletiérine, and in ten minutes it was dead.

He gives the following directions for administration of the drug. The patient is to take only a light supper the evening before using the remedy, consisting of milk, etc., afterwards a light physic. The pelletiérine mixture is to be taken in the morning before eating, and one or two hours afterwards a strong cathartic is to be administered.

In twenty-six cases treated in this manner, eight passed the parasite with its head; eight passed the parasite without its head; eight passed the parasite without its head and neck; two passed small pieces of the parasite only. P.

MONOPLEGIA DUE TO TUBERCULAR MENINGITIS OVER THE MOTOR AREA.—In the *Progrès Médical* (February 7) is an interesting report of a case under the care of Prof. Cornil, in which left brachial monoplegia was found to be due to a definite tubercular mass in the right hemisphere, situated at the junction of the middle and upper thirds of the fissure of Rolando, pressing partly upon the ascending frontal and partly upon the ascending parietal convolutions. The growth was flat, yellowish in color, and appeared to be formed of fibrin, pus, and tubercules: from it granulations were observed extending along the course of the veins. Tubercle-bacilli were found in the inflamed meninges. The lungs were in an advanced state of caseous pneumonia.

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EDITORIAL.

THE STATE OF THE CORTICAL MOTOR CENTRES IN EPILEPSY.

THE clinical observation that certain cortical lesions of the brain may be attended by epilepsy is not new. Since La Motte, in 1705, first trephined for epileptiform convulsions apparently due to depressed fracture of the skull, the operation has been repeatedly performed by modern surgeons. Dudley, in 1828, operated by resorting to this method in five cases of epilepsy, and was successful in three. Billings,* in an analysis of cases of trephining for epilepsy, found that out of seventy-two cases forty-two were cured, four were unchanged, sixteen died, and the remainder were improved though not entirely relieved. The statement of Hughlings Jackson that in men certain convulsive forms have their origin in the cerebral cortex, led Ferrier to make a series of experiments upon animals, from which he concluded that epilepsy is provoked by an irritation of the cortical motor centres. This subject has been more recently studied in Italy by Albertoni, who sought to determine the pathogenesis of the epileptic seizure, and by Luciani, who has formulated a theory of the origin and site of lesion of epilepsy which has been accepted by many able physiologists and has found some application in clinical medicine. Giuseppe Seppilli, in a recent paper in the *Rivista Sperimentale*, 1884,† gives an admirable summary of the evidence in favor of Luciani's views, basing his argument upon a study of the conditions requisite for the production of artificial cortical epilepsy in animals, and the methods of provoking the seizures; secondly, the analysis of the access of the attack and the causes which modify it; and, lastly, the physiological interpretation of the clinical phenomena which accompany epilepsy. We cannot attempt even an abstract of this valuable paper here, but will merely point out a few of its more salient features. In the first place, with regard to the results of experimentation upon animals, it was found not only that the disposition to cortical epilepsy (*i.e.*, epilepsy produced by direct excitation of the surface of the cerebral hemispheres) varies greatly in different species of animals, but also that it is variable in the same animal, so that it may be diminished or abolished or notably exaggerated under the action of various causes. The facility of provoking epileptic attacks, it was found, depended upon the state of functional activity, or, more properly, the excitability, of the cerebral motor centres. Some of the conditions affecting excitability were studied in detail. It was found that it was entirely absent in the newly-born; it was reduced by certain remedies, such as potassium bromide, anæsthetics, alcohol; retarded by cold, anæmia, and asphyxia; but, on the contrary, it was greatly increased by encephalitis and by certain drugs, such as absinthe, atropine, cinchonidine, and picrotoxine. Electricity was generally employed in these experiments as the means of stimulating the surface of the brain.

The epileptogenous zone, according to Luciani and Tamburini, is the whole of the motor area of Ferrier and Hitzig, including the cortical centres for the limbs,

* Quoted by Gross, "System of Surgery," Philadelphia, 1872 (vol. ii. p. 177), where the author also gives an account of a very interesting case in which the depression of the skull was over what is now recognized as the motor region of the cerebral cortex. It was found, after trephining, that an exostosis had penetrated the dura mater and had irritated the underlying convolutions.

† Translated by Joseph Workman, M.D., of Toronto, Canada, and published in the Alienist and Neurologist, January, 1885.

face, trunk, and neck, for by electrically exciting any of the single centres, epileptic accesses more or less diffused are induced (although more strongly developed in the dog in the centres for the upper jaw and the face than in the centres for the motions of the limbs). It was observed as a curious fact that when the motor zone of a dog is laid bare over one hemisphere, if the animal survive it readily becomes subject to spontaneously-developed epileptic attacks after complete cicatrization of the wound. The occurrence of convulsions upon strong irritation of the sensory area was believed to be due to the propagation of the excitement to this motor zone. The gray matter is the essential part, according to Franck and Pitrés, who found that stimulation of the underlying white substance was incapable of provoking a convulsive access; though this was not in accord with the experiments of Bubnoff, Heidenhain, and Albertoni. Seppilli explains the apparent inconsistency by the suggestion that in the latter experiments the removal of the gray matter was incomplete. It was found, moreover, that partial destructive lesions of the gray substance of the motor zone provoked in the neighboring parts, still remaining intact, an irritable state by which their excitability was so exaggerated that intense convulsions were produced by slight stimuli.

The experiments of Heidenhain—showing that after bilateral destruction of the motor zones epilepsy can no longer be provoked—go far towards explaining the diffusion of the stimulus in the development of general spasms supervening upon local irritation of one side of the brain. Indeed, Unverricht claimed that the intactness of the cortical motor region is a necessary condition for the development of a complete epileptic attack. The fact of convulsions being variable in their forms according to determining causes, does not exclude the idea that they depend chiefly on abnormal excitation of the cortex.

Convulsions of bulbar origin are claimed by Luciani to be distinct from true epilepsy because they are not attended by unconsciousness, nor do they begin in certain groups of muscles and afterwards become general, as in true epilepsy which accords with results of direct irritation of the cortical motor centres. Seppilli, however, regards the view of Luciani as a little too exclusive, and believes that epilepsy may be considered as a disease of the motor apparatus of the brain, and that it is legitimate to suppose that basilar motor centres, when they supply the function of the destroyed cortical motor centres, may acquire, as these, the epileptogenous property by exaggerating their proper function in such a manner that, in cases of absolute want of the motor zone, they may in turn become points of origin and of diffusion of an epileptic attack limited to the opposite side of the body.

A case unique in literature is reported by Seppilli, of a woman, 30 years of age, in whom epilepsy had supervened at the age of twelve years upon an attack of cerebral disease. Left bodily hemiatrophy and incomplete paralysis existed, with attacks of left-sided epilepsy, commencing in the arm, in which there was also contracture. After death the so-called motor zone was found to be entirely destroyed and replaced by vacuolated fibrous tissue, which extended into the medullary substance almost as far as the ependyma of the ventricles, and was associated with degeneration of the whole of the left pyramid. This remarkable case confirms the declaration of Luciani and Tamburini,* that the basilar ganglia may have a psycho-motor function differing only in degree from that of the cortex, but in the absence of the latter it is developed and augmented and thus favors the improvement of paralytic states.

Thus experiment and observation ap-

* Rivista Sperimentale di Freniatria. Quoted by Seppilli.

parently show that the anatomical seat of the disorder giving rise to the epileptic convulsions is represented by the motor centres of the cerebral cortex. That there exists an intimate relation between this motor zone and the epileptic attack may be considered as experimentally established, and also that the presence of an active motor zone is indispensable for the generation of the convulsive accesses, no matter in what part of the body the original source of irritation may be situated.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE most important medical matter here at the present time are the Lettsomian Lectures delivered before the Medical Society of London by Dr. Lauder Brunton, F.R.S. All looked forward with expectation and now all look back with satisfaction upon them. The lecturer is one of the most conspicuous figures in the medical world here, albeit but a comparatively young man. He was always a student, in the truest sense of the word, from his earliest years, and when he first went to the University of Edinburgh was already of studious habits, and, like a genuine Scotch youth, well versed in the Scriptures. Of grave and studious habit, he was the kindest-hearted and most sympathetic of beings. A general favorite with professors and fellow-students alike, Brunton's student career was a brilliant one. Then he entered the old Royal Infirmary of Edinburgh, where he studied the vascular system carefully, with the result that he gave nitrite of amyl with striking success in an obstinate case of angina pectoris. Brunton noted that the arterial pressure was high during the attack, and knew that Dr. B. W. Richardson had found the nitrite of amyl to dilate the terminal blood-vessels and so to lower the blood-pressure. He put two and two together in practice, and thus took the initial step in that promising field of therapeutics, the means of lowering arterial tension. He also gained a gold medal for his thesis on digitalis. Like many more Edinburgh men, he found his way to London, and before long got his foot down among the staff of St. Bartholomew's Hospital, where he is now assistant physician and lecturer on materia medica and therapeutics. His scientific work has been immense. Some of the most important of his work is the section "Digestion and Secretion" in Burdon-Sanderson's "Hand-Book for the Physiological Laboratory." Then he helped Sir Joseph Fayrer in his investigations as to snake-poison. He is the editor of *The Practitioner*, and the author of "Bible and Science" and "Tables of Materia Medica," while he has written many excellent articles on albuminuria, diabetes, and allied subjects. Besides all this, Dr. Brunton is a well of information on many subjects unconnected with medicine, and often quite astonishes even those who know him well by his lore on some out-of-the-way topic. Further, he is the man of all others to whom every one applies for advice, counsel, or information when in a scientific strait: the kindest and wisest of counsellors, he is deservedly popular. He still retains a great deal of the quick manner of his early days, with a fund of humor, and good humor, underlying it. When Brunton has anything to say, the medical world listens attentively. When it was announced that he was to deliver the Lettsomian Lectures this year on "The Disorders of the Digestion," all knew that they would add to their knowledge on the subject by attending. All who set up for special knowledge about the digestion and its disorders pricked up their ears,—the writer, it is needless to say, among them. The lecturer led off by pointing out the effects of cooking the food and the advantages man derives from being a "cooking animal," preparing his food for the digestive process. (It is a curious thing that raw meat, so much advocated by some doctors, has no advocate among those who study the digestion.) Man could not be turned inside out like some of the lowliest forms of life, but the intestinal canal is still but a modification of the general tegument, and so long as food is in the intestinal canal it is not actually in the body. To pass through this intestinal skin the food must be rendered soluble: that is an essential step. Disintegration precedes solution, and so food must be masticated to prepare it for the action of the gastric juice. He then spoke of diffusibility, and brought out an interesting point. Some bodies have a very high molecular weight, as hæmoglobin, where each molecule consists of over one hundred atoms of carbon to start with. Such bodies pass with difficulty through an animal membrane, while substances of small molecular weight readily diffuse. Hydration or solution involved the conversion of the food into substances with smaller molecules. "Between the large molecules forming the myosine and starch of the beefsteak and bread, and the small one of peptone and maltose into which they are transformed during digestion, there are a number of intermediate products." This is new light from a fresh quarter. We begin to see a little more clearly how it is that dextrin and maltose may feed some persons when other food of allied chemical composition fails. In some cases of enfeebled digestion some malt-extract may be the only food which can be assimilated; and in one case where I prescribed a teaspoonful of malt-extract each

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hour, the patient made a brilliant recovery from a very hopeless-looking condition. Such talk as Dr. Brunton's is good and helpful for all of us, helping us to see our way out of a practical difficulty. Maltose is very palatable, which (to my mind), is more than can be said for peptones, and there are conditions of asthenia and acute disease where a combination of the two may be strongly indicated. "True peptones diffuse very easily through animal membranes, and in this respect they differ very greatly from other forms of albumen." Peptones may not be palatable, but they may have their utility all the same. Then he pointed out how soup comes to be the first item of our dinner. Schiff found by experimentation on animals that the introduction of a "peptogen" into the stomach of an animal enormously increased its power to digest albuminoids. The most powerful of these substances Schiff also found to be "dextrin and soup made from meat." Now for the practical application of this. Every sufferer from actual gastric indigestion ought, according to theory, to take a small cupful of meat-broth into which has been stirred some biscuit-powder or malted food ten or fifteen minutes before taking a meal at all heavy. (I am certainly going to give the plan a practical trial.) "Next to the soup usually comes fish, which is digested more easily than butcher's meat. I have already mentioned, more than once, that the rapidity with which anything dissolves depends very much on the fineness with which it is divided. Now, this is quite true of the different kinds of meat. Beef is acknowledged to be less digestible than mutton, and mutton less digestible than fish. The breast of a chicken is also reckoned to be very digestible. The muscle-fibres in fish are arranged in flaky masses, and not only are very short, but are readily separated from each other." Soup, fish, and the breast of a chicken are a typical dinner for the ordinary dyspeptic who cannot eat anything. A milk-pudding, especially if prepared with broken captain's biscuit instead of raw, uncooked starch, might fitly follow. And then Tom Carlyle, confirmed dyspeptic as he was, might have been amiable; but it is to be feared that he did not "regulate" his diet. Now, what did Dr. Brunton find from a city dinner? "This dinner was a revelation to me: it not only showed me that cooking might rank as one of the fine arts, but taught me that it might be a powerful moral agent. I went to the dinner exhausted with overwork, irritable in temper, and believing that city companies were wasteful bodies, who squandered money that might be employed for useful purposes, and that they should be abolished; I came away feeling strong and well, with an angelic temper, and firmly convinced that city companies had been established for the express purpose of giving dinners, and ought on no account to be interfered with. Nor was the good thus effected of a transitory nature: the irritability of temper, which had disappeared in the course of dinner, did not return; and the morning afterwards, instead of waking with headache and depression, I awoke strong and well and ready for work, and remained so for a considerable length of time." (This proves amply—if any proof were needed—that it was not the wine which alone was in action, but something more lasting.) He explains, however, that a succession of such dinners might prove them to have ulterior drawbacks. "But if the food have been excessive in quantity—for what is moderation for a man with strong digestion is excess for a man of weak digestion—or injurious in quality, and more especially if alcoholic stimulants have been taken in excess, the stomach will suffer, and next day the symptoms of gastric indigestion will probably appear. The most marked of these are loaded tongue, loss of appetite, tendency to nausea, and perhaps even vomiting."

So much for the first lecture. In the second he dealt with indigestion and biliousness. Of the latter he said, "The condition which we term biliousness is, in all probability, of complex origin. Its name points to the liver as its source, while its close connection with disturbances of the stomach might lead us to ascribe a gastric origin to it. The difficulty we have in ascertaining the exact causation of biliousness is no doubt largely due to the fact that disturbance of the liver affects the stomach and intestines, and disturbance of the stomach and intestines affects the liver. Indigestion and biliousness are, therefore, so closely associated in many cases that we can hardly say where the mischief begins, unless we can trace it from its commencement, although in other cases we get a clue to the primary origin of the disease by noticing whether the disturbance of function is greater in the stomach or the liver." There is a great deal of truth in this, and to discover which does come first is a great matter in giving direction to our line of treatment. According to the state of dilatation or contraction of the hepatic capillaries is the flow of blood in the portal vein. If this be checked, then there is venous congestion of the portal radicles. (When one reflects on this, one can see, with the mind's eye, how a blue pill at night and a dose of sulphate of soda next morning may unload the liver and expedite the flow of blood in the portal vein.) Such venous congestion in the portal radicles is often productive of much flatulence, which is common in indigestion (as it is in cardiac disease and emphysema where there is venous engorgement, especially in the valveless portal vein), and probably the effect of carminatives is local, producing astringement of the venules of the mucous membrane of the bowels. As to the relation of flatulence to heart-disease, he says, "My friend Dr. Mitchell Bruce has

called my attention to the frequency with which such patients complain of 'heart-wind.'" If flatulence be linked with venous congestion of the intestinal mucous membrane, it is but likely that heart-sufferers should be flatulent. Then he explained the expression, "He swallowed his grief." Depressing emotions cause a feeling of constriction (*Beklemmung*) by irritating the vagus, and swallowing abolishes for the time being this action of the vagus. Indigestion is often accompanied by flatulence, and also acidity. Sometimes the two alternate, as in Ewald's patient who said that "sometimes he had within him a vinegar-manufactory and at other times a gas-works." The feeling of acidity is not always actually excessive acidity, but the acid contents of the stomach irritate the cardiac end of the œsophagus. Fatty acids certainly do, and so produce cardialgia (heart-burn). At times the contents of the intestinal canal are too acid, as seen in the posseting of milk, the flatulency and acid mucus so often found together in babies. When the stomach is distended with gas, the sensitive cardiac end of the gullet is drawn open, and so the acid contents of the stomach come in contact with it. The association of piles with hepatic disturbance and congestion of the portal vein was then pointed out. Of course this suggests the relief of piles by acting upon the liver. Then he showed how temporary glycosuria and albuminuria may be the resultant accompaniment of disturbances in the digestive viscera. He said something on the topic which made some of his audience "sit up." It was this: "If we were to assume that because albumen is present in the urine the individual is suffering from serious disease, we should fall into as grave an error as if we were to suppose that every patient whose urine contained sugar was necessarily suffering from diabetes." He then reverted to the matter of larger or smaller molecules. "In the process of digestion large albuminous molecules are split up into smaller ones, which become absorbed and then undergo reconstruction, being built up in the portal blood, in the liver, and in the tissues, into larger molecules. The albuminous substances of the blood appear to consist of such large molecules that they will not diffuse through the glomeruli of a healthy kidney, but the products of digestion—peptones and hemi-albumose—will diffuse through the glomeruli and pass into the urine, producing peptonuria or hemi-albumosuria." When this last is taking place the patient is pallid and his tissues are badly nourished, because what ought to feed him is slipping away in his urine. And I guess (from experience) it is not by any means easy always to tell whether such is the case or the patient really has got Bright's disease. The man who can "knock this off" right away can go up one, or even take his place alongside Da Costa or Austin Flint. He then spoke of some maladies linked with indigestion, and pointed out the relations of asthma to digestion. Then came "stomach cough," where the fauces or pharynx become congested. He knew one case where a paroxysm of coughing was synchronous with an attack of gastric acidity. He next spoke of another case: "A gentleman suffered from cough which gave him a great deal of trouble: the back of his pharynx was congested, and I ordered him a gargle. He used this for some time without benefit, and then, for some reason or another, somebody gave him several blue pills, and the cough disappeared." Disturbances of the action of the heart from digestive troubles, and especially when accompanied by flatulence, are very common. He thought it possible that at times the heart-centres, like the other nervous centres, may be affected by some mal-product of assimilation acting as a toxic agent. He pointed out that sometimes a hale, gouty old gentleman eats an unusually hearty supper, goes to bed feeling quite well, yet is found dead in his bed next morning. At the autopsy nothing is found to account for death. The kidneys are contracted, and so may not be equal to casting out efficiently substances formed in the intestinal canal and absorbed into the blood which act as a cardiac poison. This seems probable enough, and also that such mal-products are at times the cause of the languor and depression found with indigestion. Long ago Dr. Brunton suspected that such a poison might exist and have an action like curari ("Indigestion as a Cause of Nervous Depression," 1880). More recently a substance had been extracted from human urine with such action, and also another, produced in the digestion of fibrin in gastric juice, to which its discoverer had given the name of "peptoxin." Then he proceeded to put the liver in its true place in the human economy, giving it a very high one. When the liver is working abnormally, then all is saturated with gloom; and if a man wishes to live on comfortable terms with himself, an efficient liver is as important as a clean conscience. That toxic "liver stuffs" produce depression and headaches and giddiness (gastric vertigo) there is no doubt.

In his last lecture Dr. Brunton spoke of the treatment of disorders of the digestive organs, which was also of high interest. There was one matter on which, however, I venture to hold an opinion differing from his. He spoke of Austin Flint's recent remarks about the unnecessary attention to "the regulation of their diet" by dyspeptics, pointing out that many dyspeptics are practically half starved because they are so afraid of taking food that they often go without any. This is quite true: so also is the statement that many become unnecessarily timid, and are afraid of food which will do them no harm. But from some familiarity with the subject I have found that to be able to give a dyspeptic a variety of suita-

ble food means a long, hard, persevering study of foods, from "baby foods" upwards, and probably can only be undertaken by a person endowed with unusual digestive powers. The dyspeptic needs variety just as much as other persons, but the variety lies within comparatively narrow limits, and a sufficient acquaintance with the dietary suitable for a dyspeptic has cost me as much trouble as anything I have ever encountered in medicine. It involves personal trial of all the varieties of natural foods and prepared foods, and knowledge of the best way to serve them. But it is ungracious to pick a hole in such admirable lectures and to set myself in antagonism to two such eminent authorities. The lectures will soon appear in the form of a book, which is certain to command a large sale on your side of the water; for his digestive organs are undoubtedly the weak point in the modern American.

J. Milner Fothergill.

CHICAGO.

OUR county asylum has been the scene of another disgraceful encounter. Dr. J. C. Kiernan, Superintendent, was the victim. The engineer, a burly brute, became intoxicated, and when called to account by the Superintendent he at once proceeded to knock that official down and kick him about the head and body, inflicting such injuries as confined Dr. Kiernan to bed for a number of days. It is almost inconceivable, but the same thing was repeated shortly after Dr. K. had recovered from the first assault, in this last instance an attendant being the assailant. The Superintendent carried both cases into a justice's court, as no satisfactory redress could be secured through the fellows composing the Board of Commissioners.

The shocking condition of the affairs in this institution has been frequently referred to in my correspondence, with the hope that it might aid a little in calling the more general attention of the profession to the wretched administration of our State and county institutions, and that some concert of action might be taken by which this utter perversion of all that is good in public charity might be corrected. The medical staff of our county hospital has been reorganized. The Board of County Commissioners have changed the number of medical men upon the staff from fifteen to twenty: this was found necessary to provide patronage for the Commissioners, each of the latter desiring to have his man appointed. It is satisfactory to know that, notwithstanding the methods and character of the appointing power, a large number of the appointees are worthy men.

The profession have been laboring for the establishment of a medical library in connection with our public library, and had so far succeeded that the collection began to attract some attention. The number of books, though not large, had reached proportions quite encouraging to the gentlemen having the matter in hand, when the discovery was made that some unwelcome patron was drawing the books from one end of the shelf more rapidly than the medical library committee could furnish a supply at the other end; in fact, the books were being systematically stolen, and it remained only a question of a few days till the thief had made the transfer complete. It was soon discovered that a Mr. Funk, a student in one of our leading medical schools, was the person trying to acquire illegal possession of the medical library. Funk had secured some employment in the public library, and used the position to cover his thieving. The books, to the number of several hundred, were removed to a barn in a distant part of the city, where they were carefully stacked away by the industrious student. The stolen books were nearly all recovered, and our medical library goes on again. Of course the arrest and exposure of Funk caused a sensation among all connected with the public library, as he had not entirely confined his operations to medical works. The affair created a good deal of gossip among the medical students.

The forty-second annual commencement exercises of Rush Medical College were held in Central Music Hall on the afternoon of the 17th instant. The matriculants numbered four hundred and one; the graduating class had one hundred and fifty-one members. At the present time the school appears to be the most prosperous in the Northwest. On the evening of the same day the faculty of Rush tendered the usual complimentary banquet at the Palmer House, and it proved, as usual, a most enjoyable affair.

The long-continued severity of the weather has caused a wide prevalence of lung- and throat-diseases.

Several attempts have been made to organize a Neurological Society in this city, but so far without any success. Its date of establishment is still a matter of great indefiniteness.

M.

February 19, 1885.

Traumatic Tetanus with Recovery.—A Hindu, about 30 years of age, was admitted into the Hooghly Hospital with a lacerated wound of the foot. Two weeks later, after sloughing and extensive suppuration occurred, he complained of soreness and stiffness of his jaws; the next day he had tetanic convulsions with opisthotonus. He was treated with chloral, potassium bromide, tincture of cannabis Indica, and quinine in large doses. Under the treatment he slowly improved, and finally recovered, convalescence being delayed by an abscess above the ankle-joint.—*Indian Medical Gazette*, January, 1885.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A STATED meeting was held at the Hall of the College of Physicians, January 21, Dr. R. J. Levis, President of the Society, in the chair.

DISCUSSION ON TRACHEOTOMY.

Dr. John M. Keating: "I have been much interested in the reading of the paper, and wish to say a few words in reference to the medical treatment of diphtheria with deposit of membrane in the fauces. A short time ago I had the opportunity of visiting the wards of Dr. Lewis Smith, of New York, and hearing of the use of a new substance, trypsin, which was used for the purpose of dissolving membrane. Trypsin is the active ingredient of the pancreatic secretion, and is analogous to the pepsin of the gastric juice. The advantage of trypsin over pepsin lies in the fact that, while pepsin will act only in an acid solution, trypsin acts in an alkaline or neutral solution. Dr. Smith, in a paper, recommended the use of this agent at the late meeting of the New York State Medical Association, and noted several cases in which it had acted beneficially, both in those that did not require tracheotomy and also after tracheotomy where there was membrane below the opening in the tracheotomy. I have here some of the solution which has been sent me, and offer it to any member of the Society who will try it on cases of diphtheria and report the results to this Society. The solution which has been sent to me contains four grains of trypsin to the drachm, and can be used in this strength. A small quantity of bicarbonate of sodium should be added. The application may be made either directly to the throat with brush or mop, or by means of the atomizer. This is said to dissolve membrane very readily. An interesting feature to mention is, Dr. A. A. Randolph tells me, that it dissolves dead epithelium, so that when placed on the hand it soon causes a sore.

"Recently, in New York, a small quantity of the solution which I have presented to-night was used with the atomizer in a case of tracheotomy where the membrane below the opening was tough and could not be removed. The spray was introduced directly into the trachea, and it soon loosened the attachments of the membrane so that it was expectorated and drawn through the tube."

The President: "Has the solution any other physiological effect than the dissolving of membrane?"

Dr. Keating: "I cannot say, so little is known about the preparation, except that it dissolves the epithelium of the skin. I have been told that those who stripped the pancreas in the manufacture of the extractum pancreatis suffered from sore hands, which have been traced to the action of the pancreatic juices and necessitated the wearing of gum gloves. Warmth is required to make the solution very active. This dissolves the membrane, loosens its attachments, and allows of its removal, and then the ordinary local applications can be used to prevent the re-formation of the deposit."

Dr. Addinell Hewson: "On a previous occasion I have given my views to the Society. I believe that the use of aluminium silicate, applied with the atomizer and also externally, exerts a decided influence on the tenacity of the membrane."

Dr. De Forest Willard: "I have for some time been much interested in the possibility of doing away with the tube in tracheotomy. I see from Dr. Wharton's paper that he has been unable to do without it, and such has been my experience, although in most of my cases I have removed a circular piece from the trachea. Nearly always a fold of skin or of connective tissue will fall into the opening, interfere with breathing, and necessitate the introduction of the tube. I do not think that stitching the trachea to the sides of the wound will permanently cause the opening to remain patulous, nor have I found it safe to trust the case without some mechanical appliance. Tracheal hooks seemed to me to be as likely to produce ulceration as is the tube, and they are liable to displacement.

"In regard to the danger of stenosis after removal of a piece of the trachea, I have never seen any trouble of this kind. To illustrate this fact I have brought here a child on whom I operated, removing quite a large piece of the trachea, five years ago. I should like the members to examine him to see if they can detect any evidences of stenosis. He is said not to have had even a cold since the operation. There is certainly no contraction, but, owing to the absence of the rings, pressure over the cicatrix causes a little difficulty in respiration, and a slight cough. The tube was kept in thirteen days. The operation was done for diphtheritic obstruction, the boy being then four years of age.

"The tube used should be thin, in order to give as much breathing-space as possible.

"The success of the operation depends very largely on the after-treatment, and sometimes operators are deterred from performing tracheotomy by the knowledge that the patient cannot have skilled attendants; yet in this case, and in several others where the parents have been intelligent, I have been able to dispense with professional aid.

"An important element in the after-treatment is, I think, the use of a continuous spray of steam or slaking lime; with this should be enjoined high temperature. At the time I operated, on the case presented, the

temperature ranged from 80° to 95°, night and day (it was in June), and was nearly always above 85°. In all my cases I keep the temperature of the room above 80°.

"In regard to the use of ether: while it does certainly embarrass respiration to a certain extent, yet the experience which I have had of seeing a child die under the knife from the excessive struggles without ether has been sufficient to deter me from attempting the operation without an anæsthetic unless the case was already insensible to pain. Cocaine, in my experience, does not greatly diminish pain in wounds.

"I think that, as a rule, we wait too long before resorting to tracheotomy, and as long as we postpone the operation to so late a period we shall not increase our successes. At present the death-rate after diphtheria is from seventy-five to eighty per cent. The operation is often put off until the case is almost hopeless. On the other hand, I feel bound to say that in several cases, where in consultation I have opposed the desire of the attending physician and have advised against the operation until mercury had been fully tried, recovery has occurred without tracheotomy. For years I have placed my sole medical reliance in laryngeal diphtheria upon this drug."

Dr. M. O'Hara: "I recall a case of nasal croup with apparent occlusion of the larynx in which an eminent expert told me that he had waited too long. The operation was not performed, yet the child recovered under the application of ice to the throat. The child presented all the book-indications for tracheotomy, but it recovered without the operation, and the apparent occlusion of the larynx was probably attributable to the effect of the poisoned blood on the respiratory centres. There are a number of such cases that get well without operation. I do not know that we leave these cases too long, but when the operation is performed I think that ether cannot be dispensed with."

Dr. Montgomery: "I have seen considerable of the necessity for this operation, and have performed it some thirteen times, five of which were in cases of undoubted diphtheria. I had performed the operation ten times, with ten unsuccessful cases. The eleventh case was one of diphtheria, in which the diphtheritic symptoms appeared three days before the onset of the laryngeal symptoms. This case recovered. In it the tube could not be permanently removed for three weeks after the operation, although the membrane had completely disappeared. As soon as the tube was removed and the opening closed, severe laryngeal spasm set in and required the reintroduction of the tube.

"I think that in the majority of instances the operation is postponed too long. In some of my cases on which autopsies had been performed it was found that portions of the lung had become completely emptied of air and collapsed. Under such circumstances the serous effusion which takes place in the process of resolution will cause suffocation.

"I agree with the views already expressed that the tube should be as large as possible, and prefer silver to rubber on account of the larger calibre of the tube. The fenestra is useless, and is apt to irritate the edges of the wound and increase the risk of the formation of granulations in the upper part of the trachea.

"After the trachea has become cleared of membrane, a smaller tube may be introduced and breathing may take place through the throat and around the tube.

"I have suggested a plan to lessen the hemorrhage which attends the operation. It consists in lifting up a fold of the skin, transfixing it with a knife, and cutting outwards. The knife is then laid aside and the tissues separated by tearing until the trachea is reached. There is scarcely any hemorrhage when the operation is performed in this way, and I have come to look upon the operation as much less serious than it is usually considered to be.

"In my cases I have invariably used chloroform. This is not considered so dangerous in children as in adults, and it seems to allay the spasm better than other anæsthetics. I have never seen how it was possible to dispense with the tube, for there is a great tendency to collapse of the tissues and the formation of granulations.

"I believe that in the treatment of diphtheria I have obtained marked benefit from the use of corrosive sublimate, giving from $\frac{1}{25}$ to $\frac{1}{12}$ of a grain every two hours, either with or without the tincture of the chloride of iron. This has been given to children of three or four years of age, and continued for two or three days without poisonous effects, and with a rapid decrease in the formation of membrane. I have used lactic acid for dissolving the membrane, and have been more successful with this than with any other preparation used for the same purpose. I have never obtained much apparent benefit from the slaking of lime in the room."

Dr. Jurist: "Dr. J. Solis Cohen, in a set of statistics compiled some twelve years ago and including three or four thousand cases, had found the mortality to be three-fourths of the cases operated on. Dr. Willard's statement showed that there had not been any lessening of the mortality-rate since then.

"I am much interested in the refusal of the laryngeal muscles to act in some of these cases after the removal of the tube, and have never seen an adequate explanation of it. I cannot understand why these muscles, having been subjected to inaction for only three or four weeks, should be thrown into spasm when required to return to action. Three or four weeks ago I performed tracheotomy for

supposed croup. A small quantity of chloroform was administered, and there was no hemorrhage or other complication, but when the trachea was reached the patient suddenly ceased breathing. The trachea was rapidly opened and artificial respiration practised. Breathing again took place, but ceased in ten minutes, and the child died.

"As regards stenosis after tracheotomy: I recall the report of a case of tracheotomy in which the operation was performed for a foreign body, in which the patient ever after complained of shortness of breath on going up- and down-stairs. There were no other symptoms. In this case no portion of the tracheal rings had been removed.

"I think that probably the advantages obtained by the use of chloroform and the relief from spasm are counterbalanced by the ill effects on the respiration and circulation."

Dr. S. Solis Cohen: "In reference to the inability to dispense with the tube in cases in which no organic obstruction exists in the air-passages, and in illustration of the purely nervous character of the dyspnœa, I may mention a case cited in the monograph of Dr. J. Solis Cohen so frequently referred to this evening, of a child who breathed without difficulty when the tube was suspended from a cord about his neck, although not inserted into the trachea, but who was seized with spasms of dyspnœa when any attempt was made to take the tube away from him; and another case of a child who breathed perfectly well when the tube was plugged, but almost suffocated when it was withdrawn from the trachea. These facts, in connection with another to be mentioned, would tend to show the incorrectness of Mr. Erichsen's theory as quoted by Dr. Wharton,—namely, that the laryngeal muscles need to be brought again within control of the will. I think it far more probable that the difficulty is caused by the interference of the will in what is normally a purely involuntary act. The will causes the muscles of the glottis to contract as in phonation, and if the patient did not make efforts to breathe he would have no trouble. It is known that in cases of bilateral paralysis of the abductor muscles (the glottis-openers) efforts at inspiration cause the mucous membrane of the vocal bands to be drawn downwards and inwards, increasing the obstruction. The efforts of the patient to gain breath diminish his breathing-space. When you take the tube away from the child he thinks he can't breathe, he becomes frightened, spasm results, and his voluntary efforts as a matter of course disorder what should be an involuntary function.

"Another point referred to by Dr. Wharton is as to the time at which tracheotomy should be performed. In all cases of laryngeal obstruction, whether from croup, diphtheria, or other cause, tracheotomy should be performed as soon as the auxiliary muscles of respiration are brought into action, whether or not there be much recession of the soft parts above and below the sternum. The patient will not then be exhausted by his struggles for air before relief is afforded, and will have a better chance to recover."

Dr. E. T. Bruen: "The remarks of Dr. Montgomery on the use of bichloride of mercury suggest to me to relate my experience with calomel in the treatment of diphtheria, especially when the larynx is involved. Up to a very recent time I have been an advocate of what might be called the popular treatment of diphtheria,—viz., tincture of the chloride of iron, potassium chlorate, quinine, and stimulants. I was induced to try the calomel treatment, giving it in one-fourth-grain doses every two hours to children as young as eighteen months, and continuing this from two to four days. In no case was salivation induced. This, with suitable local treatment, has been a very satisfactory mode of treatment. I am a firm believer in the local treatment in all cases in which the applications can be made, but in some the local treatment cannot be employed, and it is more particularly in these cases that the best results of the calomel-treatment were obtained. At the same time, I think that much caution must be exercised in claiming very positive results from any remedy in this peculiar disease."

Dr. Blackwood: "One point in Dr. Willard's remarks has attracted my attention, and that is in reference to tracheotomy without a tube. Three or four years after the war, while located in Northern Alabama, I saw a case which illustrated the facility with which cases would sometimes recover even under the most adverse circumstances. I was asked by a local physician to see a case of diphtheria in the last stages of the disease, suffering with laryngeal obstruction. I advised tracheotomy, which, after some objection, was consented to. No tube could be found, and therefore, after opening the trachea, a couple of small fish-hooks were inserted into the edges of the trachea and secured to a piece of elastic tape passing back of the neck. I saw the case twenty-four hours later, and learned that the wound had been kept open about half the time. A tube was procured a couple of days later and inserted without difficulty. The tube, however, was broken accidentally, and afterwards reliance was placed entirely on traction with a piece of bent watch-spring. The child went through a rather sharp attack of pneumonia, but ultimately recovered. I have seen many cases of membranous croup during the past four or five years, and in several instances children have recovered after the operation has been refused by the parents.

"Another point is in reference to constitutional treatment. I am inclined to think that jaborandi is of value. I also employ cal-

omel and soda. Jaborandi relieves the dyspnœa, promotes free secretion, and tends to loosen the membrane. I have never used local treatment, as it is of little service: local applications rarely reach the trachea unless placed directly in that tube."

Dr. J. M. Keating: "I have not heard any mention of the symptoms referable to the heart as influencing the mortality-rate. These are frequently present in cases requiring tracheotomy, but are masked by the respiratory symptoms, especially where the indications for tracheotomy are pronounced, evidenced by the action of the auxiliary muscles of respiration, by the retraction of the abdomen and of the supra-renal space, and by the hoarseness of voice. Several cases which seemed as though they ought to recover have died, and post-mortem examination has shown the presence of heart-clot which had evidently existed for some time. This is an important fact to be borne in mind in reference to the mortality, and where the operation is indicated it shows the importance of its early performance.

"This also has a bearing on those cases that die suddenly during anæsthesia and in which death is attributed to the chloroform or ether. Some years ago Dr. Wharton and myself had an illustration of this. We set the hour for performing tracheotomy in a case in which it was plainly indicated, but the child died before we arrived at the house. If death had occurred during anæsthesia, it probably would have been attributed to the anæsthetic.

"As regards treatment, I believe in local applications, and most emphatically in the internal administration of calomel or corrosive sublimate, and large doses of alcohol and of tincture of the chloride of iron, quinine, and nourishment. In a certain form of sore throat of which I have seen a great deal, there was a pseudo-membranous formation on the tonsils, the anterior half-arches being free. These cases seem to be doubtful ones, but the disease runs on and the patients get into a septic condition. In such cases I have used on the throat a four-per-cent. solution of the cocaine salicylate, followed by the application of diluted tincture of the chloride of iron (one to five) in which a small piece of alum had been dissolved. The cocaine relieved the pain and sensibility of the pharynx, while the tincture of iron coagulated and caused shrinking of the deposit on the tonsils. In these cases, and also in diphtheria, I employ a handkerchief wet with cold water to the throat. The cocaine salicylate is chosen on account of the value of salicylic acid in low forms of disease. It is a suggestion of Dr. A. A. Randolph, and the preparation I use was given me by him."

Dr. Parish: "There are two conditions which occur in diphtheria which render chloroform dangerous. In advanced cases there is fatty degeneration of the heart, and the depressing action of chloroform on the heart may cause its sudden stoppage. Again, in the condition of heart-clot chloroform would be injurious. The objection to ether is its irritating effect on the respiratory tract; but it seems to cause only a slight additional risk.

"I have seen in the last few years scores of cases of the affection described by Dr. Keating, and have not seen a fatal case, and there has been no necessity for tracheotomy. I used large doses of the tincture of the chloride of iron with potassium chlorate, giving twenty drops of the tincture of the chloride of iron with three grains of potassium chlorate in a tablespoonful of water every hour to a child four or five years of age, where there is considerable deposit giving it day and night. When the throat begins to clear, the frequency of administration is diminished."

Dr. Jurist: "I wish to offer a suggestion as to the possible cause of difficulty sometimes met with in the removal of the tube. This is diphtheritic paralysis of the laryngeal muscles."

Dr. William S. Stewart: "I have used with much satisfaction a combination of the potassium chlorate with ammonium chloride in the treatment of membranous croup. This is given in as large doses as the child can bear, and alternated with quinine. In diphtheria I also use potassium chlorate with tincture of the chloride of iron, and also Monsel's solution as a topical application. I think that if the statistics of those cases which would recover without the operation were compared with the statistics of those cases which recover after the operation, the difference would be very slight. In one case I called to see a patient three times with the intention of performing tracheotomy, but the operation was refused, and the patient recovered. It is difficult to estimate how often this operation is done unnecessarily."

Dr. R. J. Levis: "The more experience one has with tracheotomy, the more reluctant is he to perform it. Looking back on the array of my own cases, I see nothing encouraging. My first operation was successful. Then I went to the twelfth before I had another success; then to the sixteenth, which was the next success, and to the nineteenth before I obtained a fourth success. This is only four successes in nineteen cases.

"As regards anæsthetics, I consider ether a safe anæsthetic for the performance of tracheotomy. In the stage of partial asphyxia the child is easily anæsthetized. I have used it in all cases excepting those which were in a state of natural anæsthesia which precedes death. The hemorrhage is usually slight, and then only venous, except when the isthmus of the thyroid gland is cut, which I do not hesitate to do, cutting exactly through the centre and ligating it. I have seen some

trouble from venous hemorrhage, and in such cases have at once stopped the bleeding by making linear compression on each side of the trachea.

"With regard to trypsin, which has been spoken of by Dr. Keating, I hardly think that it is of much service. The cases which I have seen die after operation have all died in the same manner. Death has always occurred between the second and fortieth day. It has not resulted from obstruction of the larynx, but the symptoms always indicated that the disease had extended to the bronchial radicles, inducing deposits in these situations. I scarcely think that trypsin applied in the form of a spray would influence deposits in the bronchial radicles.

"I have been in the habit of using flexible metallic tubes, but lately incline to adopt another expedient, which consists in passing a suture through the edge of the tracheal wound and then through the deep tissues and integument at any distance from the wound. The thread or wire is then applied on both sides, and the tracheal opening held open by the deep subcutaneous sutures. This I think better than the tubes, which are troublesome. Many lives have been lost by plugging of the tube from want of proper attention."

Dr. H. R. Wharton, in closing the discussion, said, "So much time has been occupied in the discussion of the paper that I will refer to but one or two points. I consider Dr. Keating's remarks in regard to the heart-complications in diphtheria as very important, and think that many cases dying soon after operation die from heart-clot. Within a week I have seen a child of two years die within twenty-four hours after tracheotomy for diphtheria, and think that death here was due to this cause, as there was no apparent respiratory trouble.

"If I used any anæsthetic, it would be ether. I have seen alarming symptoms developed during the administration of ether which necessitated the removal of the anæsthetic.

"In regard to the difficulty in the removal of the tube, it is probable that in diphtheritic cases there is paralysis of the laryngeal muscles, as Dr. Jurist suggests; but the same trouble follows the operation for the removal of foreign bodies, showing that this is not an adequate explanation. In one of these cases the body removed was a grain of corn, and this patient was under observation for four months, and when the case was lost sight of the tube was still worn.

"In reference to early operations, it is possible that, if the operations were performed early, some patients would have their tracheas opened who would have recovered without operation: still, there are many statistics to show that cases can be saved by tracheotomy which would otherwise die.

"It is important to fix the time when the operation should be performed. When the respiratory action becomes embarrassed, and there is stridor in the breathing, with retraction of the lower ribs and the supra-sternal space, the time for operation has arrived."

Dr. H. Leaman exhibited a dynamometer of his own devising, and the meeting adjourned.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, January 22, 1885.

The President, Dr. SHAKESPEARE, in the chair.

Two cases of nævus pigmentosus. Presented by G. E. DE SCHWEINITZ, M.D.

THE first of these specimens is one removed from the face of a patient by Dr. John Ashhurst, in the University Hospital. The man was aged about 40 years, and the tumor took its origin in an ordinary mole, which, under the stimulus either of external irritants or undue manipulation, grew into a slightly raised mass with flattened top and constricted base. After Prof. Ashhurst had excised the growth, I made a microscopical examination of it, with the following result. The uppermost portion of the tumor is densely pigmented, and the pigment is further seen to be of a brown or brownish-black color, and contained in spindle- or round-cells, or to exist as free nuclei or granules. These pigmented spindle-cells sometimes are arranged so as to form the boundaries of alveoli, which are in their turn filled with moderately large, unpigmented lymphoid cells. The base of the mass shows a small-cell infiltrate, enlarged sebaceous glands, and a massing of the epithelium of the part, forming the appearance of squamous epithelioma. Below, the fat and subcutaneous tissue present nothing abnormal. This growth may be classed, I think, as an hypertrophied mole having an epitheliomatous base.

The second specimen was removed by Dr. Agnew from the back of a man, also a patient in the University Hospital. This tumor developed from a mole, and grew as a papilla-shaped excrescence above the surrounding skin-level. Microscopic examination of the mass showed it, like the former one, to be composed of a densely-pigmented tissue, largely made up of spindle-cells and free granules. Among the interstices of these were numerous blood-channels filled with corpuscles. No malignant change at its base was noted, and the surrounding skin was normal. Ziegler, in his recent work on Pathology, speaks of the not infrequent occurrence of melanotic and alveolar sarcoma in cellular warts and pigment-spots, and certainly some parts of the specimens from the first case are strongly suggestive of a sarcomatous structure.

2. *Urethral polypi.* Presented by Dr. DE SCHWEINITZ.

These specimens of urethral polypi were removed from a patient with the following history. Mr. X., aged about 30 years, contracted gonorrhœa, which was unusually stubborn and prolonged in its course. The disease had lasted about five months when I first saw the patient. He was then suffering, on account of some imprudence, from a moderately sharp attack of cystitis. Having recovered from this and from the acute symptoms of the exacerbation which had probably caused the cystitis, he returned to his former condition of a drop or two of purulent discharge in the morning, which no treatment seemed to relieve. Suspecting then that the long-standing discharge, the diminished calibre of the stream of urine, and the feeling of weight in the perineum might be due to a polypus, I explored the urethra with an improvised endoscope, and found first two and later these three polypi, removed them, and had the satisfaction of seeing a cure follow this treatment. They were all situated within the first three inches of the urethra. I think no doubt these little tumors are papillomas, and belong to the more common varieties of new growths which are seen in the male urethra. A single examination of them with a pocket lens reveals quite nicely their dendritic formation. Tumors of the urethra, in the male at least, are usually stated to be of rare occurrence, although, as William Belfield, of Chicago, has remarked, they may not be so rare as is usually supposed, as the urethra is seldom systematically examined upon the post-mortem table. Belfield himself, in a series of seventy autopsies, discovered two urethral tumors.

Slides from an adenofibroma of lachrymal gland. Presented by Dr. G. DE SCHWEINITZ.

These sections were made from a tumor of the lachrymal gland which was removed by Dr. Agnew. The growth occurred in a young man, was of five years' duration, and painless, having been situated in the upper and outer part of the orbit. The eye was sightless from atrophy of the optic nerve. The tumor, which was about the size of an English walnut, was surrounded by a dense fibrous capsule; the main body of the growth was composed of fibrous tissue, through which the remains of the gland-tissue are seen. The epithelium is in places in a state of proliferation, but apparently no formation has taken place which could be justly characterized as malignant. The tumor may be classed, I think, as a fibroma or adenofibroma of the lachrymal gland.

Specimens from excision of the astragalus for caries, etc. Presented by Dr. C. B. NANCREDE.

Elmer —, æt. 9½ years, had for some years suffered from characteristic symptoms of strumous disease of the astragalus, the details of which it is unnecessary to give. Early in November, 1884, he began to have chills, severe pain in the ankle-joint, which now became swollen, hectic, and profuse diarrhœa. Although I had never been able to detect dead bone by the probe, I felt convinced that an abscess, the result of carious bone, had ruptured into the previously only slightly diseased ankle-joint. I accordingly under ether examined the ankle-joint, which I found contained a considerable quantity of very offensive pus, which communicated with a cavity lined with carious bone, situated between the astragalus and os calcis. I excised the astragalus and scraped out the carious external malleolus, as well as the roughened surfaces of the tibia. The boy has since done well.

Dr. M. LONGSTRETH presented the following specimens, the notes of which, with the discussion, not having been placed in the recorder's hands as yet, will appear in print at a future time.

1. *A kidney preserved as to color and texture by ordinary illuminating gas.* 2. *Sarcoma of the femur removed by amputation by Dr. J. H. Brinton.*

Pyelonephritis and chronic parenchymatous nephritis in the same patient, complicating cystitis. Presented by Dr. J. TYSON.

E. D., a prostitute, æt. 25, white, was first admitted to the Philadelphia Hospital September 10, 1883. She was at that time suffering from diarrhœa, and stated that she had previously passed blood, although apparently none was passed after admission. She had no symptoms which attracted attention to the urinary organs, and no examination of the urine was made. The history of the case at present attainable does not show whether or not she had had gonorrhœa. Her diarrhœa disappeared under treatment, but she regained strength slowly. She was discharged October 4, 1883, apparently in fair health, but was readmitted on October 25, 1883. She now presented œdema of the legs and face, and an examination of the urine made about this time disclosed the presence of pus. She complained of pain in the lumbar region and in the head, and was much debilitated. The treatment was directed to warding off a threatened uræmia. The dropsy disappeared, but her other symptoms progressively increased until death relieved her. She died with symptoms of uræmia.

Autopsy, December 2, 1883. — Nothing noteworthy in external appearance; slight pleuritic adhesions; thoracic organs otherwise normal. Abdomen: peritoneum normal; liver normal; spleen not examined. Kidneys: left, typical large fatty organ; right, swollen to more than twice its normal size; when opened found to present a marked pyelonephritis with great distention of the pel-

vis; the calyces filled with pus partly fluid and partly inspissated; bladder was in a condition of chronic cystitis. Cause of death, pyelonephritis with large white kidney.

Dr. TYSON said that the chief interest attaching to the specimens lay in the association of these two very opposite conditions,—apparent pyelonephritis, or suppurative interstitial nephritis, with chronic parenchymatous nephritis. The former condition is a well-recognized result of cystitis; the latter not. Dr. Tyson had never before met these conditions in association. Usually as a result of a long-continued cystitis, however induced, we have a suppurative nephritis of one or both kidneys, but never, so far as he knew, suppurative nephritis. He thought the most reasonable explanation of the association was that of coincidence; that there had existed previously, perhaps, a chronic parenchymatous nephritis; that upon this a cystitis had supervened, and upon this a pyelonephritis.

Dr. TYSON said that he would like to ask the members whether they had ever found association of these two varieties of diseased kidneys with cystitis.

Dr. FORMAD thought he had seen one such case, but there was no history.

Dr. OSLER said that the condition of this kidney is not infrequently met with in persons dying of intercurrent affections, and that he should not interpret the case as previous speakers had done. The kidney-disease was probably of many years' duration, the cystitis was secondary to it, and the other kidney, affected with parenchymatous nephritis, had become subsequently diseased. It was well known that the ordinary scrofulous kidney, with pus in the urine, etc., often lasts for many years, ending in general tuberculosis or inspissation of the pus. He would like to ask how long pus had been observed in the urine, the state of the bladder, and whether there were other findings or tuberculosis in the various organs.

Dr. TYSON replied that he was in the possession of no definite facts as to the duration of pus in the urine. The case had only been under observation for three months, and certainly pus had been detected two months before her death. C. B. N.

(Owing to unavoidable circumstances, a portion of the discussion in which various explanations differing from Dr. Osler's were given has to be omitted.—RECORDER.)

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held February 19, 1885, A. JACOBI, M.D., President, in the chair.

ELECTRICITY AS A STIMULANT IN RESPIRATORY AND CARDIAC FAILURE.

A paper with the above title was read by Dr. CASPAR GRISWOLD. By electricity he referred to the faradic and galvanic currents, but more especially the faradic, as being more applicable in cases of emergency. The author asked the question, Can electricity be so applied clinically as to stimulate the heart? Before answering the question he referred to the nervous mechanism of the heart, stating the well-known facts that if the external nerve-supply were divided the heart would continue to act by the influence of its immediate nerve-supply; also the inhibitory influence of the pneumogastrics, which, if stimulated sufficiently, would stop the action of the organ in diastole; also the accelerators, which, when stimulated, caused increased rapidity of cardiac action at the expense of power. He then stated that in order to stimulate the heart with electricity the current must be applied directly to the organ. To apply the current to the nerves in the neck would do the opposite of increasing the blood-flow. Therefore the question asked, Can electricity be so applied clinically as to stimulate the heart, must be answered in the negative. He then recited two cases which had been reported in the medical journals in which an attempt had been made to stimulate the heart by applying the current over the pneumogastric, in one of which, a case of poisoning by hydrocyanic acid, it was claimed that the patient's recovery was due to the stimulating influence exerted by the current upon the heart; but Dr. Griswold thought this was impossible, and said the reason why a fatal issue was not caused by the strength of the current said to be applied was due either to lack of working order of the battery or to paralysis of the pneumogastrics and their consequent failure to respond to the electrical current. It might be possible, in a case in which there was cardiac failure due to over-rapidity, that stimulation of the pneumogastric would make the organ act more steadily; but the theoretic benefit to be obtained by depressing the heart by this means would not be justified.

It was perfectly rational that by stimulation of the phrenic nerves respiration might be stimulated: experiments had plainly proved this fact. But clinically it was not so easy to apply the current to the phrenic nerve alone, as it was in such close relations to the pneumogastric in the neck that both were liable to be affected equally, and thus we would have depression of the heart, which would probably more than counteract the benefit to be derived from stimulating the respiration. At any rate, these points should be borne in mind in attempting to stimulate the respiration by applying the current to the phrenic nerves: first, that stimulation of the phrenic nerve should never be undertaken without a clear understanding that the current at the same time reached the pneumogastric; second, only a mild current should be applied, and the effect upon the heart's action should be carefully watched; third, avoid sudden application to the neck of a current sufficiently

strong to produce pain or muscular contraction in other parts of the body.

Dr. Griswold then gave details of certain experiments which he had made upon dogs, in which the pneumogastric and phrenic nerves were stimulated after the administration of certain poisons, as aconite, opium, chloroform, and ether. In aconite-poisoning the pneumogastrics were paralyzed, and electrical stimulation of these nerves produced no influence upon the circulation. In chloroform-poisoning a comparatively light current caused the heart to stop in diastole, the pneumogastrics responding normally upon an already depressed heart. In ether-poisoning the heart stood stimulation of the pneumogastrics as well as in health. He here remarked that chloroform was a cardiac depressor, while ether had no such effect, as had been conclusively proved by experiments. In opium-poisoning there was even less danger from stimulation of the pneumogastrics than in health, and it might consequently be perfectly safe to stimulate the phrenic nerve in cases of opium-poisoning. If, however, morphine were injected directly into the veins of a dog, the heart's action would be so depressed that it would not be safe to employ electrization.

Dr. A. D. Rockwell, being requested to open the discussion, said he thought electricity would be more especially valuable as a stimulant in respiratory than in cardiac failure. The electrical current acted with unequal force according to whether it were applied to the right or the left pneumogastric nerve. Some years ago he made some experiments, applying the electrical current to the breast through needles after removal of a tumor for cancer, and he then found that the immediate effect upon the heart was depressing, but the secondary effect was to increase the heart-rate. Theoretically, the precautions thrown out by the author were well founded, but practically electricity might be employed with a greater degree of immunity from danger. He referred to a case of opium-poisoning, seen with some other physicians a number of years ago, in which the electrical current caused an increased respiratory and cardiac rate, but after about two hours it had a less marked influence, although when it was discontinued the respiration and circulation diminished. After four or five hours they gave up their efforts, supposing the patient must die; but she lived nevertheless.

Dr. Fordyce Barker made some remarks relative to collateral questions raised in the paper. The author had stated that chloroform was a cardiac depressor while ether was not. For as many as twenty-five years Dr. Barker had observed that chloroform could be administered with immunity from danger during labor, whereas in general surgical practice, where the patient was depressed from a contemplated operation, ether should always be chosen in preference to chloroform. Even in organic disease of the heart he did not fail to administer chloroform in cases of labor calling for an anæsthetic. It was not until comparatively recently that this point regarding the choice between chloroform and ether in different classes of cases had been in any way placed upon a scientific basis.

Dr. R. W. Amidon had little to say other than in commendation of the remarks of the author, and said he thought the precautions thrown out with regard to electrization of the neck were highly proper, inasmuch as most emergency cases were seen only by the general practitioner, who might have little knowledge of the special anatomy and physiology of the nervous mechanism of the heart and the influence of electricity.

Dr. L. Putzel did not think the clinical points made in the paper were in accordance with facts. It was impossible, for instance, to speak correctly of galvanism of the pneumogastric nerves in the human subject. The best specialists of the present day did not speak of galvanization of the pneumogastric, but of the neck. As to the evil effects of strong currents applied in this situation, he had not witnessed any upon the heart. In a number of cases in which he applied the current over the region of the pneumogastrics for exophthalmic goitre he had noticed no immediate effect upon the circulation. With regard to faradism in opium-poisoning, it certainly proved of no benefit in one case in which he employed it, but it was true also that his patient was obese, and the current may not have penetrated the fat so as to influence the nerves beneath.

Dr. J. L. Corning took exception to the remark of Dr. Putzel that one could not apply the current to the pneumogastric or phrenic nerves clinically in the human subject, and said that by means of his apparatus his friend Dr. Chichester had been enabled in a case of goitre to reduce the heart-beat from one hundred and forty to eighty per minute within a comparatively short time.

Dr. A. H. Smith thought that in opium-poisoning the object in view in the use of electricity was to stimulate respiration, and in order to do this without depressing the heart the current should be passed for but a moment at a time. He also thought that physicians under the excitement of the moment were sometimes poor judges of the normal rapidity of respiration: the patient seemed to breathe more slowly than he did in fact, and thus flagellation was carried even to the extent of producing depression.

Dr. Putzel remarked, in reply to the criticisms of Dr. Corning, that he did not mean to say galvanization of the neck could not produce slowing of the pulse, nor that galvanization of this region might not be galvanization of the pneumogastric, nor that galvanization was not useful in exophthalmic goitre.

The PRESIDENT some years ago used electricity in a large number of cases of still-born children for the purpose of producing the respiratory act, and ten or twelve years ago communicated a paper on the subject to the New York obstetrical practice. Like Dr. Smith, he found that continued application of the current had a baneful influence, but by applying the poles here and there over the region of the respiratory muscles, letting them remain in contact with the surface for but a moment, the influence was to produce respiratory effort, and was beneficial.

Dr. ROCKWELL wished to emphasize the remarks of the President concerning the importance of short applications of the current.

Dr. GRISWOLD closed the discussion, reviewing the points made in his paper, and also spoke of the experiments which had shown that chloroform was a local anæsthetic, and particularly a depressor of the heart, while ether was not.

DESCRIPTION AND PRACTICAL DEMONSTRATION OF THE PRACTICAL WORKING OF ROBERTS'S IMPROVED ELECTRO-OSTEOTOME; A NEW FORM OF PORTABLE STORAGE BATTERY; AND AN ELECTRICAL ILLUMINATING APPARATUS. BY MILTON JOSIAH ROBERTS, M.D.

The electro-osteotome, which had been greatly improved, was first described in the *Medical Record* for October 22, 1883. It consisted of an electro-motor, propelled by a strong current of electricity passing through the shaft, to the distal end of which could be attached one of two heads with suitable gearing for driving a buzz or trephine saw. Dr. Roberts had performed six osteotomies upon one patient in the short space of only thirty-two seconds. In the demonstration the hardest thigh-bone was divided in four seconds. The instrument was swung on a rubber elastic or metallic spring, enabling one to obtain all the delicacy of touch furnished by the probe. To the electro-osteotome was attached an electric light and mirror for night-operations. Dr. Roberts also exhibited a head-mirror with an electric illuminator, devised by Dr. Jarvis.

Remarks in admiration of the practical working of the instrument were made by Drs. Corning, Jarvis, Birdsall, and Holcombe. Dr. Poore said he had always found the chisel satisfactory in osteotomies, and doubted whether the saw would offer many advantages. Dr. Fanning also made some remarks.

THE REFLEXES IN CHOLERA.—From careful examination of seven cases of cholera, in every one of which the reflexes were exaggerated, Josias concludes that in cholera, as in typhoid fever, there is probably a constant increase of reflex excitability of the cord.—*Le Progrès Médical*, 31st December, 1884; *Edinburgh Med. Jour.*

REVIEWS AND BOOK NOTICES.

TRANSACTIONS OF THE ACADEMY OF MEDICINE IN IRELAND. Vol. II. Edited by WILLIAM THOMSON, M.A., F.R.C.S., General Secretary. Dublin, 1884.

In 1882 a movement was inaugurated for the amalgamation of the various medical societies of Dublin, and it was finally arranged that they should meet as sections of the Academy of Medicine, and that in order to encourage work in other special departments sub-sections under the titles of Public Health and of Anatomy and Physiology were established.

The opening meeting was held in December, 1882, and since then the sessions have been regularly held, the weekly meetings being under the charge of the several sectional councils in regular rotation. The present volume contains the transactions for the session of 1883–84, with the communications arranged under the various headings of the sections,—medical, surgical, obstetrical, pathological, and the sub-sections of public health and of anatomy and physiology. These papers, which aggregate about seventy-five in number, are generally brief and to the point, and many of them are of unusual interest and value, and abound in useful and practical remarks upon pathology and treatment. The volume is well printed, and has a number of excellent illustrations.

ELEMENTS OF PRACTICAL MEDICINE. By ALFRED CARTER, M.D. Lond. Third Edition. New York, D. Appleton & Co., 1885. Pp. 447, small octavo, cloth.

This synopsis of practical medicine has been well received by the profession, and we need only announce that it has reached its third edition. Condensed into small compass, yet readable and connected, it supplements larger treatises by giving the elementary principles and main facts of this department of medicine.

ECZEMA AND ITS MANAGEMENT. A Practical Treatise based on the Study of Three Thousand Cases of the Disease. By L. DUNCAN BULKLEY, A.M., M.D. Second Edition. New York, G. P. Putnam's Sons.

This work we had the pleasure of noticing favorably on its first appearance. The present edition has been carefully revised, special effort being made to simplify the subject and make more clear the practical suggestions. For the permanent cure of eczema it is essential that its constitutional nature shall be recognized and its internal relations and modifying elements properly understood. Dr. Bulkley defines eczema as a non-contagious, inflammatory disease of the skin, of constitutional origin, acute or chronic in char-

acter, manifesting any or all the results of inflammation at once or in succession, and accompanied by burning and itching. The treatment recommended is in accordance with this view of the pathology of the disease. The work is to be commended for clearness and directness of statement, and for its judicious treatment of a disease that has often been misunderstood.

Messrs. Lea Brothers & Co. have issued a handsomely printed octavo volume, bound in cloth, entitled "One Hundred Years of Publishing, 1785–1885," in which the history of the house, founded in this city by Mathew Carey a century ago, is traced to the present day. The account shows the gradual development of a great publishing business, which has rendered lasting service, in this country, to medical education, as well as to other departments of science.

GLEANINGS FROM EXCHANGES.

Pneumonectomy.—Dr. Chas. E. Jennings writes to the *British Medical Journal* that from some operations performed on the cadaver, made in accordance with the suggestion recently made by Sir Spencer Wells, he has demonstrated the feasibility of removal of a part or the whole of a lung. The details are as follows:

The root of the lung can readily be reached from behind, through a triangular aperture in the chest-wall, made in front of the scapula. The subject having been placed in a suitable position, with the scapula drawn upwards and outwards, an incision four and a half inches long was made parallel to and two inches from the median line of the body, commencing opposite to the third dorsal spine. The skin, fascia, rhomboidei minor and major, and some fibres of the trapezius and latissimus dorsi, were divided. From the lower extremity of this incision another of similar length was made obliquely downwards and outwards along the upper margin of the eighth rib. The vessels divided by these incisions were of inconsiderable size.

The flap, which consisted of skin, scapula, and soft parts, was now thrown outwards and upwards, so that an interval on the chest-wall was cleared, which corresponded to the fifth, sixth, and seventh ribs, with their intercostal spaces. These ribs were divided transversely in the line of the first incision, and again rather obliquely along the line of reflection of the flap. A triangular aperture was made in the thoracic parietes, which afforded ready access to the root of the lung. By such an operation abundance of space can be gained for the extirpation of the lung; subsequently, efficient drainage would be provided for, and the aperture in the chest-wall would be well protected by the scapula.

Another operation was performed on the front of the chest. An incision four inches in length was commenced parallel with the lower border of the first rib, and carried outwards towards the coracoid process. The skin, fascia, and pectoralis major were divided. A vertical incision was made from the third costo-chondral junction below to the inner extremity of the horizontal incision above. The upper border of the pectoralis minor having been depressed, the second rib was divided, first close to the outer extremity of the horizontal incision, and again through its chondral attachment. The intercostal muscles having been carefully divided in the lines of the cutaneous incisions, a flap, consisting of skin, fascia, pectoralis major, part of the second rib, and intercostals, was thrown down, and the parietal layer of the pleura was divided. Free access was thus gained to the lung, and the aperture in the chest-wall was quite large enough to permit the removal of a large part of the organ.

In conclusion, so far as can be stated from these operations on the dead body, it does not appear that pneumonectomy, in actual practice, would be an extraordinarily difficult operation, and the entire lung could readily be removed by the first, or the upper portion of it, by the second, procedure.

It is not often that pneumonectomy becomes the subject of consultation, though, in consideration of the large number of times a lung has been removed in the lower animals with impunity, the operation would, under certain circumstances, be indicated; and pneumonotomy, as Sir Spencer Wells said in his letter, might be performed more frequently than it is, with hopes of advantage, in cases of pulmonary cavities and gangrenous lung.

Successful Treatment of Thread-Worms.—Dr. Millard, of New York, in a communication to the *Medical Record*, calls attention to the fact that the habitat of the oxyuris, or thread-worm, is not the rectum, but, as pointed out by Cobbold, in the colon, and especially the cæcum. In the treatment of a case of a lady 23 years of age, after injections and local treatment had entirely failed, he obtained a rapid cure by administering forty-five drops of Parke, Davis & Co.'s fluid extract of pomegranate-root before each meal; santonine (gr. iss–ij) between meals and at bedtime, with sulphate-of-soda-waters (Pullna, Marienbad) before breakfast, to cleanse the mucus from the intestinal tract.

Wine of Coca in Fatigue.—Dr. E. R. Palmer contributes to the *American Practitioner* for February an account of a physiological experiment made during a walking-match, upon the effects of coca in sustaining the system under prolonged muscular effort. The subject was a young girl of seventeen

years, who was a professional pedestrian, but who was much reduced in strength by poor food and too great reliance upon alcoholic stimulants. The effects of the coca in sustaining muscular vigor were very marked. About a pint of the wine of coca was consumed. The distance travelled was three hundred and fifty miles in seven days.

PEPSIN AS A SOLVENT OF BLOOD-CLOTS IN THE BLADDER.—The editor of the *Northwestern Lancet* calls attention to a novel use of pepsin in surgery. In a case of distended bladder, when clotted blood prevented evacuation, he dissolved a scruple of Jensen's crystal pepsin in an ounce of warm water, and in less than twenty minutes had the satisfaction of seeing the patient pass a full stream of urine and disintegrated blood.

MISCELLANY.

AMERICAN MEDICAL ASSOCIATION.—The Thirty-Sixth Annual Session will be held in New Orleans, Louisiana, on Tuesday, Wednesday, Thursday, and Friday, April 28, 29, 30, and May 1, commencing on Tuesday, at 11 A.M.

"The delegates shall receive their appointment from permanently-organized State Medical Societies and such County and District Medical Societies as are recognized by *representation in their respective State Societies*, and from the Medical Department of the Army and Navy, and the Marine Hospital Service of the United States.

"Each State, County, and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *provided*, however, that the number of delegates for any particular State, territory, county, city, or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

Secretaries of Medical Societies as above designated are earnestly requested to forward *at once* lists of their delegates.

Also, in order that the Permanent Secretary may be enabled to erase from the roll the names of those who have forfeited their membership, the Secretaries *are, by special resolution*, requested to send to him annually a corrected list of the membership of their respective societies.

OFFICERS OF SECTIONS.

["The Chairmen of the several Sections shall prepare and read in the general sessions of the Association papers on the advances and discoveries of the past year in the branches of science included in their respective Sections. . . . ."—*By-Laws*, Art. II. Sec. 4.]

Practice of Medicine, Materia Medica, and Physiology.—Dr. H. D. Didama, Syracuse, New York, Chairman; Dr. G. M. Garland, Boston, Massachusetts, Secretary.

Obstetrics and Diseases of Women and Children.—Dr. R. S. Sutton, Pittsburg, Pennsylvania, Chairman; Dr. J. T. Jelks, Little Rock, Arkansas, Secretary.

Surgery and Anatomy.—Dr. Duncan Eve, Nashville, Tennessee, Chairman; Dr. C. B. King, Allegheny, Pennsylvania, Secretary.

State Medicine.—Dr. E. W. Schauffler, St. Louis, Missouri, Chairman; Dr. J. N. McCormack, Bowling Green, Kentucky, Secretary.

Ophthalmology, Otology, and Laryngology.—Dr. J. A. White, Richmond, Virginia, Chairman; Dr. Eugene Smith, Detroit, Michigan, Secretary.

Diseases of Children.—Dr. J. H. Pope, Marshall, Texas, Chairman; Dr. S. S. Adams, Washington, D.C., Secretary.

Oral and Dental Surgery.—Dr. W. W. Allport, Chicago, Illinois, Chairman; Dr. E. C. Briggs, Boston, Massachusetts, Secretary.

"A member desiring to read a paper before the Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting."—*By-Laws*.

Chairman of the Committee of Arrangements.—Dr. Samuel D. Logan, New Orleans, Louisiana.

PROPOSED AMENDMENTS TO THE CONSTITUTION TO BE ACTED UPON.

By Dr. C. H. Von Klein, Ohio:

1. No person who shall hereafter graduate from a medical college where literary education is not a prerequisite to such graduation shall be eligible to be a delegate to the American Medical Association.

2. All delegates to this Association, as a part of their credentials, shall present certificates from the County, District, or State Associations they represent, showing from what medical college and when graduated; but this provision shall not apply to delegates from the Army and Navy.

PROPOSED AMENDMENTS TO BY-LAWS.

By Dr. Foster Pratt, Michigan:

Each Section shall nominate its Chairman and Secretary,—all other nominations to be made, as now, by the nominating Committee.

By Dr. Carl Seiler, Pennsylvania:

Divide the Section on Ophthalmology, etc., and form two, one consisting of Ophthalmology alone, and one consisting of Otology, Laryngology, and Rhinology.

WM. B. ATKINSON, M.D.,
Permanent Secretary.

HONORS FOR WOMEN.—The Conseil Municipal has decided to admit women as house-surgeons in Paris hospitals.

WEST VIRGINIA STATE BOARD OF HEALTH.—We regret to notice the resignation of the able and indefatigable Secretary of the West Virginia State Board of Health, Dr. James E. Reeves, who finds the duties of the office becoming too onerous for his health. The Governor of the State, in reluctantly accepting the resignation, justly recognizes the value of the labors of Dr. Reeves and his associates, who have raised the standard of the profession, and through the operation of sanitary laws greatly aided the material welfare of the community. Dr. L. D. Wilson, of Wheeling, has been appointed to fill the vacancy.

GAILLARD'S MEDICAL JOURNAL.—We are glad to see that the publishers of *Gaillard's Journal* have secured the services of Dr. P. Brynberg Porter as editor, a position for which Dr. Porter's experience and attainments eminently fit him.

PAPINE is a preparation of opium, representing a strength of one grain to the drachm. Dr. F. O. Young, of Lexington, Kentucky, writes that it has a pleasant taste, does not excite nausea, and is the best preparation of opium that he is acquainted with.

NOTES AND QUERIES.

OBITUARY.

LOUIS ELSBERG, M.D., Professor of Laryngology at Dartmouth and in the New York Polyclinic, died at his home on February 19, 1885, of acute pneumonia occurring in the course of chronic nephritis. In his death the medical profession suffers more than we can estimate. Born at Iserlohn, Prussia, April 2, 1836, his family immigrated and settled in Philadelphia, where he graduated at the High School with the highest honors of his class in 1854. Three years later, after pursuing the regular course of study, he received the medical degree of Jefferson College. After serving as resident physician in Mount Sinai Hospital, New York, for six months, he went to Germany, where he was so fortunate as to become a member of Prof. Czermak's first class of pupils for the study of laryngology, in company with Stoerck, Lewin, and Semeleder. The enthusiasm of the young student led him to pursue with ardor the new department of medical science, and on his return, at the end of a year, he was already an expert in laryngology. With characteristic energy and signal ability he continued his studies, after very wisely deciding to commence practice in the city of New York. His career from this time forward was brilliantly successful. He was made a member of the faculty of the University Medical College in 1861, and held this position until 1878. Subsequently he accepted a similar position in the Dartmouth College and in the Polyclinic, both of which positions he held at the time of the occurrence of his rapidly-fatal illness. Dr. Elsberg was commonly recognized as the pioneer in his special department in this country. By him the first public clinic for treatment of diseases of the throat was opened in 1862. In 1880 he founded the *Archives of Laryngology*, with the assistance of Prois. Knight, Lefferts, and Cohen. In June, 1878, he was active in organizing the American Laryngological Association, of which he was the first president. Although Dr. Elsberg did not live to complete a systematic treatise upon laryngology, a task for which his attainments and analytical mind eminently fitted him, he made frequent contributions to medical literature which greatly enriched and advanced laryngology in this country. In 1865 a treatise by him on laryngoscopic surgery was crowned with a prize from the American Medical Association. His fondness for biological studies was frequently shown by papers which he read before scientific societies, of which we would especially mention the address delivered before the Alumni Association in the Jefferson Medical College in 1882, on "Changes in Biological Doctrines during the past Twenty-five Years," and one showing great originality and research entitled "The Structure and other Characteristics of Colored Corpuscles," before the New York Academy of Sciences. He was a member of many learned societies at home and abroad.

WILLIAM BRAITHWAITE, M.D.—The death of Dr. William Braithwaite occurred January 31, 1885, at his home, in Leeds, England. He was at the time of his death in his seventy-eighth year. He began practice of medicine in Leeds in 1830, and filled the post of honorary surgeon to the Eye and Ear Infirmary and lectured at the Leeds Medical School on the Diseases of Women. In the midst of a large practice he was interested in the literature of his profession, and in 1840 began the publication of the famous *Retrospect of Medicine*, published half-yearly, which has now reached its ninetieth volume. It has been as highly appreciated in America as in England, and has been reprinted here since its first appearance. Dr. Braithwaite's son, who for the last twenty-five years has been associated in the work, will continue its publication, so that it will, as heretofore, be issued simultaneously in England and New York. Dr. Braithwaite attributed his excellent health during the declining years of his life to the fact of his being a total abstainer from alcohol for more than thirty years.

STRAPPING THE TESTICLE.

"A New Method of Strapping the Testicle" is the title of an article by William Barton Hopkins, M.D., in No. 449, vol. xv., February 7, 1885, of this journal. It introduces the use of india-rubber bands in place of the adhesive plaster in orchitis.

I am glad to see the attention of the profession drawn *again* to this method (the more so as the above-mentioned article is very comprehensive and complete), but in justice to myself and to medical history must claim the credit of the *original* introduction. (See my article on this subject in No. 11, vol. iv., December 13, 1873, of this journal.)

I am confident that Dr. Hopkins, in calling this method *new*, did not know of its having been tried and published by me eleven years ago.

I would have passed this small matter over were it not that we army medical officers, when on duty at military posts, have so few opportunities of making original observations owing to our generally limited field, that our little "should not be taken away."

I admit, however, that the proposition to apply the strips longitudinally, and fastening them to the encircling band with rubber cement, is an excellent *modification* of the method introduced by me in 1873.

ALFRED C GIRARD,
Asst-Surgeon U. S. Army.

[Elastic pressure for orchitis is certainly not new, but we think that Dr. Hopkins has suggested a novel method of its application, without at all intending to detract from the credit due to Dr. Girard for priority of introduction.—ED. P.M.T.]

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 15, 1885, *TO FEBRUARY* 25, 1885.

BENTLEY, EDWIN, MAJOR AND SURGEON.—Relieved from further duty at Fort Clark, Texas, and assigned to duty as post-surgeon at Fort Brown, Texas. S. O. 17, Department of Texas, February 16, 1885.

PATZKI, JULIUS H., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence further extended seven months on surgeon's certificate of disability. S. O. 40, A. G. O., February 17, 1885.

TAYLOR, M. E., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Stanton, New Mexico, as post-surgeon. S. O. 29, Department of the Missouri, February 21, 1885.

PERLEY, H. O., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect about the 5th of March, 1885. S. O. 16, Department of Dakota, February 10, 1885.

ROBINSON, S. Q., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Spokane, Washington Territory, and ordered for duty as post-surgeon at Fort Klamath, Oregon. S. O. 23, Department of the Columbia, February 9, 1885.

KEAN, J R., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—(Recently appointed.) Assigned to duty at Fort Sill, Indian Territory. S. O. 23, Department of the Missouri, February 11, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MARCH 21, 1885.

ORIGINAL LECTURES.

REMARKS ON TWO CASES OF DISLOCATION OF THE TARSUS.

Delivered at the Pennsylvania Hospital

BY THOMAS G. MORTON, M.D.,
Attending Surgeon, etc.

GENTLEMEN,—The case shown at the last clinic, of compound dislocation of the tarsus, which I told you was such an unusual accident, has since died. I remarked then that I thought the case was very rare; that I had not been able to find a similar one in the previous records of this hospital, nor had I seen any in my service, extending over twenty-one years. By a strange coincidence, a second case of the injury, almost identical with the first, except that it involved the left instead of the right foot, has been brought into the hospital, and is now before us.

The first was caused by catching the foot in an elevator; the second, by a horse falling upon the patient. The interesting features of this dislocation are well shown in the photographs, which I will now pass around for your inspection. (See woodcut.) In the case before you there was also marked inversion of the foot, almost precisely as in the other case. There was, however, in this case, as you will notice in the specimen, a fracture with separation of a small portion of the articular facet of the astragalus, which remained in place, between the malleoli. In both cases the tibia and fibula were intact.

The first patient, as you remember, was a man over 50 years of age, and his condition was such as to demand amputation of the leg. But we were unable to establish reaction in order that an operation could be performed, and he died of shock three hours after his admission into the hospital, January 19. In his case, you will remember, there was no fracture; simply a compound, sub-astragaloid dislocation of the tarsus inwards. He also received serious internal injuries, from which he died. As I told you, the results of resection after compound dislocation of the ankle-joint were not generally favorable in a man of his years and mode of life. In the present case, although he was willing to submit to amputation, we thought, after a consultation of the surgical staff, that we would be justified in making the attempt to save the foot by resection of the astragalus.

This patient is a German, 50 years of age. He is a large, robust man, apparently of drinking habits, although he says he was not intoxicated when the accident occurred. He was walking along on the ice, leading his horse, when the animal fell over upon him, crushing his leg under him.

Finding, after removing the remainder of the astragalus, that the end of the fibula projected so as to interfere with drainage, the projecting portion was removed with the bone-forceps, and after a drainage-tube had been introduced the wound was brought together, dressed with lint and carbolized oil, and the entire extremity placed in a fracture-box and covered with bran to absorb the discharges.

I am very glad to have had the opportunity of presenting these cases to you, as they are so rare that the possibility of their occurrence has been doubted by some surgeons.

[The patient did well for a time, but ultimately developed symptoms of pyæmia, of which he died, February 28.—REP.]

ORIGINAL COMMUNICATIONS.

THE DANGERS FROM COAL-GAS IN OUR HOUSES.

Read before, and publication ordered by, the Atlantic County (New Jersey) Medical Association, February 2, 1885.

BY W. THORNTON PARKER, M.D.

DR. RICHARDSON,* in his work on "Diseases of Modern Life," calls attention to impure air as "the specific cause of some diseases, the disposing cause of many." Reviewing the different conditions of impure air from crowded rooms, where the atmosphere is poisoned by the accumulation of products of respiration and excretion, devitalized air, and air poisoned by sewer-emanations, and outside influences injuring the air which supplies our dwellings, he considers the danger to health from the air which has become overheated by iron stoves, but he does not refer at all to the dangers of *carbonic-oxide poisoning.*

The severe condemnation of the average stove is well deserved, and Oscar Wilde has very cleverly called the American stoves "unpunished crimes." But Americans who have lived in England during cold weather complain of the unhealthy rooms our English cousins live in, particularly in London. The open coal-grates do not sufficiently warm the room, and, being usually of poor construction, the atmosphere is soon filled with coal-gas and smoke. On cold, raw days the occupants of these English homes huddle together around the open-grate coal fire, breathing in the irritating smoke and the deadly coal-gas, and deluding themselves perhaps with the idea that they are getting warm. Where one finds one *good* open fire in England, a hundred bad ones are also to be found. This is particularly true of the hotels and boarding-houses where strangers find temporary shelter; but even in the homes of gentlemen and well-to-do people I have noticed the abominable torment of smoke and coal-gas and the absence of reasonable warmth. And yet I believe these English homes to be far healthier than our own. Their open fireplaces offer some chance for ventilation, but our close stoves for burning coal, while they allow very much coal-gas to escape into the room, afford no suitable means for ventilation. Open fireplaces are, however, rapidly increasing in number in this country, and better stoves are being manufactured. The venerable stove invented by and named after Franklin is one of the best for health, and has many imitations. An excellent stove called the "Fire-on-the-Hearth Stove" possesses excellent features and deserves the highest recommendation. It can be used for either wood or coal as a pleasant and healthy open fireplace.†

I am not fond of our overheated American houses, but a degree of heat which saves one from fairly shivering is to be expected. I have ceased to wonder that, in spite of the splendid physique of the English, their otherwise healthy homes, excellent, well-cooked food, and admirable system of exercise, these people suffer so much from consumption. It is not fair to load the climate with the blame for all this. The source for so much of this lung-trouble in England is to be traced to the miserable smoky rooms loaded with coal-gas, and in some places the outside atmosphere is also loaded with the smoke and coal-dust and gas of the countless factories. In this country we secure the poison by other methods, and it is not *our* climate *altogether* which is the cause of so much consumption among our people.

In searching for the causes of consumption, the miserable bacilli of tuberculosis may be allowed to rest for a time in the "farms" for the rearing of this interesting and much-advertised curiosity. In battling with impure air in all its forms and by securing the destruction of the agencies developing this death-dealing monster we shall do more to save life and prevent tuberculosis than the examination of millions of bacilli will accomplish.

Impure air, how best to save our people from its depressing, poisonous, and far-reaching, death-dealing properties, should be the very *essence*, as it is the *most important*, of our investigations in preventive medicine:—how to prevent its existence; how to expel it and destroy it when found. Every one knows that few, if any, of our American homes are free from its poisonous influence. Any physician of experience must have come in contact with patients suffering from consumption and still

* Diseases of Modern Life. By Dr. B. W. Richardson. D. Appleton & Co., New York.

† A pamphlet-manual on the subject of "Sanitary Heating and Ventilating" is furnished by the Smith & Anthony Stove Company of Boston.

living, struggling to live, in an atmosphere which may have been the direct, the only, cause for the disease. The medical attendant comes daily with his prescriptions of potassium, oil, and opium, to find little, if any, change for the better in the unfortunate victim in the grip of this which is so pre-eminently a disease of filth. Nothing is said about pure air with any practical benefit. Either the patient cannot, or will not, or knows not, how to change the impure atmosphere of his home. The medical attendant often neglects to speak of the stinking, close apartments, lest his criticism might grate harshly and even meet with rude repulsion. So the farce of medical attendance goes on, until some change is made or death comes to relieve in pity. This picture is not overdrawn. It is around us all, on every side, and all over the world. I have even heard the Creator blamed for making man so weak and his lungs so vulnerable that deaths from consumption were so dreadfully frequent that it constituted a plague. A chase after the cause goes on in every direction, hunting for microscopical atoms in diseased membranes and in the products of broken-down tissues. The loathsome worms which infest the body after death might as well be reckoned the "cause of death," as the microbes sometimes found in the diseased products resulting from consumption, the *cause*, the bacilli, of consumption.

In the *Virginia Medical Monthly* for August, 1884, I have contributed a paper concerning the "Communicability of Phthisis," in which I have quoted from Green his theory concerning the cause of consumption. It is so excellent and is so related to the subject under consideration that I present it again for wider circulation:

"General feebleness and want of vigor lead to loss of muscular strength and weakness of the heart, and thus tend to prevent the full expansion of the chest, to cause a stooping posture of the body, and to impair the force of the circulation,—all conditions favoring blood-stagnation in the highest portion of the lungs; further, the toneless condition of the blood-vessels and the poverty of the blood with which the constitutional feebleness is so often associated furnish the conditions which are the most favorable to transudation. Lastly, in connection with this part of our subject, I must ask you to bear in mind that one important factor in the pathology of phthisis is the state of the general health, quite apart from any inherited constitutional feebleness; and there can be no doubt that an impaired state of health very greatly favors the development of the disease. This fact gives additional support to the view we have been taking, inasmuch as any acquired weakness must necessarily play the same *rôle* in the causation of apicial stagnation and exudation as the inherited feebleness to which we have alluded. It is when the two are associated, as they frequently are, that we have the conditions most favorable to the development of the disease.

"Whatever the communicability *possible* in phthisis, we can, by attention to the general health, and by changing the residence of incipient cases and improving the habits of our patients, do very much at present to lessen the terrors of this great plague. Undoubtedly we are but beginning to treat this disease, and before long we shall be able to offer still greater hope than at present."

In Dr. Frank Woodbury's pamphlet* "On the Rational Treatment of Pulmonary Consumption" much that I could wish to have circulated concerning the preventive treatment and the *rational* treatment of consumption is to be found.

Having thus considered some of the injurious effects of impure air, let us look more directly at the dangers from coal-gas poisoning.

Our daily papers are constantly reporting deaths from this most dangerous and highly-poisonous gas. I have reported two very interesting cases myself occurring in the practice of my father,† and it is only within a few days that I have read of some other cases in our daily journals. No one denies the deadly power of this gas in large quantities. Let us see what minute and oft-repeated doses will do, administered from the middle of October to the middle of May, each year, to millions of our inhabitants, and then let us wonder, if we can, why consumption is so prevalent in these United States! The claim that coal-gas plays so important a part in this

* Reprint from the Philadelphia Medical Times, July 15, 1882.

† "Two Cases of Poisoning with Carbonic Oxide." The Medical Index, Kansas City, Missouri, June, 1884.

scourge may seem far-fetched; but when we consider the power of this poison to destroy life we cannot doubt that its constant presence in the atmosphere of our houses must very greatly weaken and deteriorate the constitutions of those constantly inhaling it.

Our medical works afford surprisingly meagre information concerning carbonic-oxide poisoning, and our medical journals seldom report cases. A very interesting article appeared in the *New York Medical Journal* for December, 1883, but I am unable to quote from it. Boehm* says that "the quantity of carbonic oxide required to kill is not easy to estimate," and that "children succumb rapidly to the action of this poison," on account of the greater rapidity of their respiratory functions. "The first subjective symptom which occurs after breathing the poison is a burning feeling in the skin of the face (Klebs), quickly followed by giddiness and headache, which gradually becomes most intense. The chief site of this headache is in the temples. This headache or pain is generally associated with a subjective feeling of strong pulsation in the temporal arteries. Occasionally we get feelings of nausea and of oppression in the stomach and in the præcordial region. Very often, though not invariably, these are associated with a variety of subjective sensations, as motes dancing about, muscæ volitantes, noises in the ears, and the like symptoms which indicate the severance of the sensorium from the domain of reality and the transition to perfect loss of consciousness." "The access of insensibility is either a sudden withdrawal from consciousness, like a stroke, or it is preceded by pronounced phenomena of great discomfort, anxiety, nausea, and excitement, which often lead the poisoned persons to make an effort to leave the poisonous atmosphere in which they find themselves, or to try to get air by opening the windows, etc. Very often the insensibility attacks them during this very effort, so that the poisoned person falls down half-way to the window or door and lies there unconscious. At this stage all perception and consciousness of anything further are lost, so that we cannot look to the victims for any further account of themselves. The subjective symptoms which are noted in cases of recovery or restoration to consciousness are more varied and less characteristic. The most marked is a feeling of general weakness and extreme fatigue, which often lasts for several days, and accurately corresponds to the objective symptoms of this stage. Vague headaches, a want of clear conceptions, and general obscurity of the mental faculties are associated with this, as they are with many other conditions met with in a variety of other diseases. . . . In cases which end fatally the victims either never wake from the deep coma (sopor), or their awakening is only transitory and imperfect, and soon gives place to fresh attacks of insensibility and more or less suddenly leads to death."

"Besides the abnormalities of respiration dependent on the nerve-centres, we sometimes get palpable changes in the organs of respiration, which occur under the form of either acute bronchitis, hæmoptysis, or pneumonia, with or without pleurisy." Friedberg and others consider these conditions as directly dependent on the poisoning. Such is a description of the more violent forms of the disease, and, considering the prevalence of the poison, it would be hard to overestimate the injurious effects from carbonic oxide gas which must be daily inflicted upon so many thousands of people.

The following case may illustrate the action of this poison. A lady of my acquaintance, of excellent constitution, while visiting lately a neighboring city, went to her room at the hotel where she was stopping, and retired for the night. There was an open-grate fire of coal in the room burning at the time. So much coal-gas escaped into the room that not only the transom over the door was opened, but also the window was let down a little from the top. Sleeplessness caused by the coal-gas was experienced, but finally sleep overtook the guest. Upon awakening early in the morning a feeling of heaviness and pressure in the head was experienced, with sensations as if the head had been hanging down for a long time, accompanied by a sensation of deafness and suffusion of the eyeballs. The lady hurried to the window and opened it wide; and after bathing the head with cold water a violent epistaxis commenced, the blood flowing very thick and steadily. The hemorrhage lasted about ten minutes. A severe headache persisted for forty-eight hours afterwards, and the

* Ziemssen's Cyclopædia, vol. xvii. p. 464.

disagreeable head-symptoms also continued. It can be readily imagined what the result might have been had the transom and window remained closed all night.

Carbonic oxide is a violent, penetrating, and very dangerous poison, and has undoubtedly occasioned, directly and indirectly, countless numbers of deaths. In the cases occurring in my father's practice the *youngest* perished, being most easily overcome by the poison which filled the room, escaping from a leaking stove-pipe. The daughter was found dead in the bed, turned upon her face. Considerable epistaxis had occurred, and the bladder had been evacuated. In the case of the lady who was more or less severely poisoned, which I have reported, epistaxis also was observed. This fulness of the head and the very dark color and thickness of the blood I have noticed frequently in those exposed very much to the poison of carbonic oxide. The case my father saved of the two poisoned—one being already dead when he reached the house—owed her life to very prompt treatment and (in connection with the remedies administered) to *venesection*. The case reported in the *New York Medical Journal* was, I believe, saved by transfusion of blood. The evidence that the blood is early affected, and in a serious manner, and also decidedly thickened, is very well established, and venesection is, in many cases, as desirable as transfusion.

The fact that carbonic oxide is a deadly poison needs no further proof than the few remarks I have already prefaced. Its deadly, poisonous character is generally accepted. Can we not reasonably maintain that a poison so subtle in its operations, so generally present in our homes and offices, must exert a very powerful influence in causing consumption and in foiling our best efforts at cure? It is not remarkable that our lungs break down when exposed to the wear and tear they endure constantly. To this foul, poisonous carbonic oxide gas, which is so irritating and destructive, the greatest amount of harm can, I think, with reason be accredited. It is not a wonder that our delicate lung-substance breaks down, but that it is able to stand this strain of human life, in this age, so long! Our houses are heated by furnaces, stoves of various patterns for burning coal used as heaters, and more or less by kitchen stoves. Almost all of the stoves at present in use pour out into our homes, and for the destruction of their occupants, volumes of death-dealing coal-gas. It requires only a very short exposure for a healthy person in a room loaded with coal-gas to feel sick, "headachy," and generally miserable, unable either to eat or sleep,—in short, to experience in a lesser degree all the symptoms of carbonic-oxide poisoning which we have already mentioned. Where this goes on day after day and month after month, the lung-tissue shares the general impairment and becomes changed and degenerated, and diseased lung-tissue results. Referring again to Green's theory of consumption, which must be the accepted theory to-day of the majority of medical men, we find that this destructive action of the carbonic oxide gas in our dwellings is capable of and does bring about precisely this state of "*general feebleness and want of vigor*" which is the root and cause of consumption. Then "all conditions favoring blood-stagnation in the highest portion of the lungs" encourage perverted, abnormal development, and "tuberculous" deposits. Where this destruction has commenced, it is hard to stop its progress. A perverted and often malignant operation of so intense and poisonous a grade has commenced that nothing *can* quench the fire of the disease or limit its ravages. Generally speaking, these cases are so much under the influence of this abnormal action and this fever from the poisoning and malnutrition the body has so long endured that the *only chance for life is in an aseptic atmosphere*, dry and pure. Very many cases cannot improve in a moist climate like this at Atlantic City, and yet it is true that Atlantic City does afford a dryer and softer atmosphere than the average resorts east of the Mississippi. Cases which will not do well here have left to them the mountains, like the Adirondacks; and, such places failing, they should go at once to the resorts of Western Kansas, Colorado, Montana, Texas, or New Mexico,—into the only climate capable of curing consumption, a dry, moderately elevated, and somewhat equable climate (and, I might add, quite free from coal-gas).

But these Western health-sections, with the glorious, pure, dry air they offer now, can soon lose their health-giving properties. Factories and engines pouring out coal-gas will soon put an end to the pure-air supply. I do not intend to overesti-

mate the dangers from coal-gas. Dr. Richardson's list of the different agents poisoning and rendering air unfit for animal use all aid in creating our dreadful scourge of consumption, but to his list I wish to add coal-gas as the one enemy whose dangerous properties seem to be least recognized. The "Society for Instruction in First Aid to the Injured" declares, in Article II. of its constitution, that the object of the society "shall be the dissemination of information as to the preliminary treatment and nursing of the sick and injured, and as to the laws of health." What a valuable aid the physician of preventive medicine has here, ready to assist him in his mission of mercy! The amount of good this Society is capable of accomplishing, if properly supported, is simply incalculable, and every medical man and every intelligent man in this country and throughout the world must most heartily wish it God-speed. It is a noble undertaking.

We have here in Atlantic City a health-resort admirably suitable for many forms of disease and prostration.* The air is comparatively dry, and generally clear and bracing. The town is accessible to our citizens living in large cities, who need its benefits most. The feeble and convalescents can find here an almost balmy atmosphere. At least it is milder than the climate of any place within hundreds of miles, except perhaps other sections on this same coast, but which are at present not habitable in winter. The preservation of this reputation can only be accomplished by strong protection of its *pure-air supply*. Factories in the town will destroy this reputation, and neglected sanitary precautions are at work now. The safety of the city as a *sanitarium* depends upon the faithful support of the Board of Health. I notice too often the poisonous coal-gas in our streets, poured out from engine-houses or locomotives. This is not desirable, and the railroad-track would be in better place some blocks farther back: I mean for reasons of health. Pure air, wholesome food, hygiene, are the three remedies for consumption *par excellence*, but useful only when combined. These must be the treasures to be found by all at a real *sanitarium*, and the absence of these stamps the health-resort as a fraud.

In conclusion, if I have convinced my medical brethren of what they already well understand (of the dangers of carbonic-oxide poisoning), it will undoubtedly bring about some changes here and there, as far as possibilities go, in clearing our homes of much poison. As medical men, we see all about us signs of great interest in sanitary matters. The people are awakening to the necessities which are exhibiting themselves now in every direction. Life is becoming appreciated as a trust placed in our own hands, which we must protect if we would enjoy. In our homes are the greatest dangers, and the physician might almost feel discouraged as he contemplates the laborious responsibility he has assumed. We are custodians in a great measure of the public health, and our duty—our most important duty, often unpleasant, and often misunderstood, and seldom appreciated—is to man; also to battle for preventive medicine. Much can be done to-day, and much of usefulness is before us for the future.

[Since writing the above, I have read a very interesting paper in *The Sanitarian* for January, 1885, by Dr. Holden, on "House-heating and its Dangers." It is stated that "it is probably no exaggeration to say that one-half of the diseases of the present day are due to the defective hygiene of modern dwellings and tenements."]

Atlantic City, N.J., January 30, 1885.

* For further information concerning the climate of Atlantic City the reader is referred to a very interesting paper by Dr. Boardman Reed, "What Atlantic City can do for Consumptives," in the New York Medical Journal for March, 1881.

A CASE OF ADDISON'S DISEASE —WITH AUTOPSY.

Read before the College of Physicians of Philadelphia, January 7, 1885,

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of and Professor of Clinical Medicine in the University of Pennsylvania.

H. P., 27 years of age, married, with a healthy family, was born and always lived in the mountains of Pennsylvania. He worked hard, and often, when in the woods hunting or lumbering with men stronger than himself, overtaxed his strength. On one occasion he hurt his back so badly as to lay him up for a week or so. He often wrenched his back in lifting heavy articles. He drank a little whiskey, smoked a little, chewed to excess, and ate his meals rapidly, but for a man in his position his habits were good. He never had syphilis, and was never exposed to such depressing influences as worry and anxiety. There was no inherited family predisposition.

He had the ordinary diseases of childhood, but was usually well until the age of twelve years. At that time his stomach began to trouble him, and he noted that indiscretions in diet would cause dyspepsia, with its usual symptoms, which would disappear when the diet was regulated. As he grew older, these symptoms of dyspepsia became more frequent and troublesome, and were often associated with spells of diarrhœa and colicky pains in the abdomen. Between the attacks the bowels were regular.

During the past six years his strength gradually failed, and for a year he had been unable to follow his accustomed avocation. His flesh was well preserved until six months before coming under observation, within which time he had lost ten pounds. For three or four years he had had a pain between the shoulders, which, however, was not very troublesome. During the past few months the dyspepsia had been almost constant, and more troublesome, and in addition there was a continual distress, and pain across the stomach running through to the back. There never were spells of vomiting with the dyspeptic symptoms, and during all this time the appetite was uniformly good.

Two and a half years ago he noticed that his color was darker than usual. This he attributed to exposure to the sun, and during the following winter the discoloration grew less distinct, but it returned with the return of spring, and last winter, instead of growing less, the color became more intense.

Upon entering the wards of the Philadelphia Hospital, October 1, 1884, he thought that the color of the cheeks was lighter than it had been six months before. The general condition had failed no more rapidly since the appearance of the discoloration than it did before. His hair had begun to turn gray at the age of twenty.

The notes upon admission state that he was apparently a well-nourished man, with dark-brown hair sprinkled with gray; the pupil of the right eye a trifle larger than that of the left (probably physiological). "He takes very little interest in anything but his family, and when away from home he suffers acutely with homesickness. Last spring he came to the hospital to stay, but ran off in twelve hours, stating that he could not stand the place. His mental condition is good, and he sleeps well. The tongue is moist, with only a little yellow coat. After eating he has a feeling of fulness in the stomach, and has a dull pain across the pit of the stomach and through into the back. This is aggravated by the presence of food, and is sometimes sufficiently severe to keep him awake. There is no tenderness, no nausea or vomiting. The bowels are costive, and since being more careful in his habits he does not have spells of diarrhœa as frequently as formerly. He has great weakness and a feeling of excessive muscular debility, and any exertion produces breathlessness, palpitation of the heart, and complete prostration. There are occasionally attacks of palpitation and short breathing even without exertion.

"The whole surface of the body is darker than natural, the discoloration being most marked on the face, where it extends from a little under the roots of the hair down over the neck to the line of the collar, and on the backs of the hands, extending to above the wrists, where the color is at least as dark as the complexion of a mulatto. It, however, has not the yellow tinge of the mulatto, but is more of a mahogany tint, as though stained with walnut-juice. It is not uniform, but is distributed in patches with little intervals of lighter-colored skin. It is not at all affected by pressure, and is not bounded by a sharp line of demarcation, but fades gradually into the surrounding skin. The lighter-colored skin is somewhat darker than the average. There is no swelling. The whole surface of the body is darker than usual, and, as he states that it is darker than it used to be, we may say that it is darker than normal. He states that the color deepens as the surface becomes cold. The finger-nails are of the ordinary tint, and contrast strongly with the dark fingers. The mucous membrane of the inside of the lips is darker than natural, and scattered over it are irregular, sharply-defined purplish patches."

An examination of the blood was made by Dr. William E. Hughes, to whom I owe this admirable history. The number of red globules was 5,130,000 to the cubic millimetre. There were 9000 white corpuscles to the centimetre, or 1 to 560 red. The red globules were a trifle smaller and a little paler than normal, and some of them deeply pigmented. The white were normal in size, some containing pigment-granules, and some deeply pigmented. There were also some free pigment-granules. I must add that his temperature was normal, or even below normal, as a rule, though on one or two occasions there was a rise to 99½° or even 101° or 101½° for a few hours, apparently due to gastric irritation.

He was confined to bed. His diet was carefully regulated, and was varied from time to time to suit the failing powers of the stomach. For the most part it consisted of milk. Several applications of the actual cautery (Paquelin's) were made over the renal region posteriorly. Internally, he took aromatic spirit of ammonia, which proved an acceptable and useful stimulant to him. He lost strength steadily and quite rapidly, and from the date of admission, October 1, to the date of death, November 18, he lost twenty pounds,—from one hundred and twenty-four down to one hundred and four pounds. The pulse grew feeble and rapid. There were from time to time unaccountable sudden failures of appetite and digestive power. He was very

low-spirited, and complaining constantly of distress and of inability to sleep quietly. Vomiting occurred occasionally during the last three weeks of his life. The pulse was barely perceptible at the wrist for two weeks before death. The discoloration grew somewhat darker towards the close. For the last forty-eight hours he was profoundly unconscious.

The post-mortem examination was made five hours after death by Prof. William Osler, assisted by Drs. Formad, Hughes, and Sykes.

Body of medium size,—fairly well-built man; moderate wasting, particularly of the face. The skin dark in color, most marked on face, neck, hands, penis, and scrotum. In those regions the color is that of a light mulatto. Rigor mortis not present. Panniculus on abdomen about one-half inch in thickness. Rectus and other abdominal muscles are of a dark-red color. The omentum is fatty, adherent to the parietal peritoneum in right hypochondrium and to front of cæcum. There is extensive perihepatitis and adhesion of the liver to the diaphragm by fibrous bands, which can with slight difficulty be torn through. The surface of rest of parietal peritoneum is a little opaque. Membrane over small intestines is smooth; over mesentery presents numerous superficial fibroid opacities (these are specially seen towards the root of the mesentery). The mesenteric and general sub-peritoneal fat *considerably increased* in amount. The coils of small intestines are somewhat shrunken. The stomach is also small and atrophic. In the preliminary dissection the right supra-renal was found firmly attached to the under surface of liver and to the side of inferior cava. No special thickening about its outer surface, but there is a fine capsule of fat. On attempting to separate the kidney and supra-renal from the liver, firm fibrous union is found. The cardiac end of stomach is attached to the enlarged left supra-renal, and the spleen and tail of pancreas are closely united to it. Kidneys, supra-renals, spleen, and retro-peritoneal tissue taken out together for dissection.

Lungs: pale; crepitant throughout; a little congested at bases; no pleuritic adhesions; no caseous masses; one or two small pigmented nodules; bronchial glands not enlarged.

Heart: loose dark clots in right auricle, projecting into veins; same in right ventricle; left ventricle in rigor mortis; left auricle contains a dark clot; valves healthy; no atheroma of intima of aorta; muscular substance a little rusty-brown in color; does not look fatty.

On removal of heart, a very considerable amount of blood exuded from the veins.

Liver: perfectly normal-looking, good color, and plenty of blood; the bile-vessels are normal.

Stomach: is very small; contains only bile-stained fluid; the cardia a little thin; mucous membrane normal.

Kidneys: of average size; color good, except immediately beneath enlarged capsules, where the tissue is soft, pale, and many of the tubes are fatty.

Intestines: cæcum and colon full of firm, hard scybala; ileum normal; Peyer's glands distinct; two inches from cæcum one long patch begins which measures six inches in length, and presents in a typical manner the shaven-beard appearance; the solitary glands are a little swollen and prominent. Bladder is full of urine; the mesenteric glands not swollen; the mesentery is very fat. No swelling of ribs, clavicles, or any of bones noted.

Spleen: slightly enlarged; closely united to diaphragm and left supra-renal by old adhesions; pulp of medium consistency.

Lymph-glands: some of the lymph-glands of the abdomen, particularly those of the mesentery and retro-peritoneal, are swollen, grayish-red in color, and several of them contain grayish, translucent nodules, with opaque centres, looking like small tubercles; some as large as peas, and the centre distinctly caseous.

Supra-renals: the right is closely adherent to the kidney, diaphragm, and inferior cava, and to the liver above. It is two and a half inches in length, one and three-quarter inches in vertical diameter, and rests upon the top of kidney, not descending into the hilus. It is exceedingly hard and firm, and on section shows a peripheral, dense, grayish-white, partially translucent tissue, and centrally three or four yellow, caseous masses, separated from each other by strands of fibrous tissue of almost cartilaginous hardness.

Left capsule: is much larger; covers the top of kidney, and descends on its inner surface well into the hilus, measuring three and a quarter inches in length, two inches vertical, and two and a half inches in thickness. The lower end of the spleen is firmly united to it, and tail of pancreas is also attached to it. The splenic artery and vein run along its anterior surface in the thick, fibroid, fatty tissue, and at one point the calibre of these vessels is very materially reduced.

The mass is extraordinarily firm, cuts with the greatest resistance, and presents identical characters with the right, except that at the most anterior region there is a pocket of creamy-looking pus, and at a central spot the caseous matter has undergone softening. At the most anterior part, close to the cœliac axis, the left semilunar ganglia is directly embedded in the fibrous tissue, and can be seen as a rounded grayish mass about one-quarter inch in diameter, and three small nerve-fibres can be seen passing from the ganglia in the dense tissue about it.

Semilunar ganglia: the splanchnics look normal, and can be traced directly into the semilunar ganglia; as the right passes on the

crus there is a small ganglion developed upon it; it is free from all adhesions; the branches are readily dissected and look normal. The left semilunar ganglion is directly involved in the fibrous tissue of the supra-renal, as stated above; the nerves of the left ganglion, as they pass out, are involved in the cicatricial tissue of the left supra-renal capsule, and cannot be dissected, but can be seen on section; several filaments can be traced to the branches of the cœliac axis.

At the concave margin between the two lunar ganglia there is a small dark-yellow body, probably a supernumerary adrenal. A bunch of normal-looking nerves passes from the right directly to the left semilunar ganglion. The branches passing to the right supra-renal can be traced in the fat and along the artery; they are neither numerous nor large.

MICROSCOPIC EXAMINATION.

Left semilunar ganglion: teased portions from the centre of it show innumerable ganglion-cells, most of which are very darkly granular, but the nuclei and in places the nerve-processes can be distinctly traced; nerve-fibres, medullated and non-medullated, are numerous, and in many places show remarkably slight change; in some cords the fibres are less distinct, fat-granules numerous, nuclei elongated, and the process of disintegration appears to be going on. In sections the ganglion-cells can be seen separated from each other by a considerable amount of nucleated tissue. In places they are still closely set together, but in others they are in a great part atrophied, and only one or two can be seen in the fibrous connective tissue, being recognized by the dark granular pigment. The section showed the nerve-fibres through the hard sclerotic tissue, and the chief change noticeable is a marked elongation of the nuclei, and, indeed, a multiplication of them.

Right semilunar ganglion: the cells are very readily isolated; the nuclei distinct, and in each instance surrounded by tolerably dense, dark, pigment-granules; the nerve-fibres appear normal.

Several portions of nerve-fibres passing out from the right semilunar ganglion were examined, none of which showed any special change; the cord of the thoracic sympathetic and the ganglia normal; the cells of the latter moderately pigmented.

Marrow from rib: it is dark-red in color, does not look fatty, and presents the characters of ordinary red marrow; many of the colorless cells are very granular and of average size; no great number of small ones; nucleated red blood-corpuscles tolerably abundant; no cells containing red blood-corpuscles.

Marrow of vertebra: rather more fatty, of a deep, rich color, and differs further from the fact that it contains a number of cells containing red blood-corpuscles; in places these are extraordinarily numerous and large.

Heart-muscle of left ventricle in a state of brown atrophy; a few of the fibres present fat-granules throughout them.

Spleen-pulp: in addition to the ordinary elements there are also very numerous corpuscles containing red blood-corpuscles in all stages of degeneration.

It will be seen that this case was a very typical one of Addison's disease, both as to its clinical symptoms and as to the lesions present. The absence of anæmia is shown by careful examination of the blood, indicating that the main cause of the symptoms was to be sought in connection with the sympathetic nervous system; and the extensive and positive lesions carefully made out by Prof. Osler in this case fully confirm this view. Undoubtedly in many cases of Addison's disease the chief cause of the symptoms is to be found in such nervous implications and lesions; but in other instances it is clear that there is a progressive anæmia associated which must play a part in causing the symptoms. In cases where the exudation in the capsules undergoes cheesy degeneration with absorption of the disintegrating organic materials, it is not improbable that there may also be an element of sepsis which would aid in inducing cachexia, even if it did not lead to tuberculosis, which, as is well known, not rarely appears in the late stages of Addison's disease.

The frequent allusion to severe strains or injury of the back in the history of this case suggests the possible origin of the disease of the capsule from repeated irritations caused by violent muscular strain or by sudden shocks to the frame. It will be noted that in a considerable proportion of cases this disease has arisen in subjects liable to such causes as the above.

REPORT ON HYGIENE.

BY HENRY LEFFMANN, M.D.

PROGRESS OF CHOLERA.

THE excitement in regard to the probable visit of cholera to this country has in a measure subsided. At the present time it is practically absent in Europe, the bills of health from Mediterranean ports recording entire freedom from the disease, and there being no evidence that it has at all appeared in English cities, except perhaps a few sporadic cases in Lon-

don. It remains to be seen whether this condition is merely one of abeyance, or whether the germ has not attained sufficient distribution.

The manner of propagation of the disease does not appear to be yet clearly established. The recently-published results of the English Commission are decidedly at variance with those published under the auspices of Dr. Koch. Dr. Klein, of the English Commission, is not disposed to admit the causative relation of the comma-bacillus, but finds a straight bacillus a more constant element of the choleraic discharges. Further, a report from Calcutta states that Dr. Klein has found in three houses in which the disease was severe that the water-supply was quite pure, while in another locality, in which the water used for drinking and washing was found full of the comma-bacilli, only one case occurred.

The stringent order of the United States Treasury in regard to the importation of rags has had the effect of almost entirely suspending their shipment. Much exception has been taken to the embargo thus established. Dr. George B. Shattuck, of the *Boston Medical and Surgical Journal,* has expressed strongly the opinion that no instance is on record of the communication of cholera by rags or general merchandise, and insists that the baggage and clothing of immigrants are much more likely sources of conveyance of the poison. Dr. Leale, of New York, in an elaborate article detailing his experience in the epidemic of 1866 in that city, traces it to the infection of a car-driver who was seated for a short time on some baggage of steerage-passengers just from a ship. Both Dr. Shattuck and Dr. Leale are of the opinion that the most urgent duty of port-inspection is the examination of immigrants and their baggage. It may, however, be asked, How can this inspection amount to anything more than form? There is no means of distinguishing the presence of cholera and other infection, and if quarantine restrictions are to be applied they will not be successful in excluding cholera if, after the ordinary examination, immigrants are allowed to land with their baggage and be absorbed into any community they may select.

Mr. Ernest Hart, in a lecture delivered in December last before the Parker Museum in London, expressed the opinion most decidedly that quarantine is useless, disinfection of doubtful value, but cleanliness, in the fullest and widest sense of the term, is the prime element of safety. Rome, with its pure water-supply, had escaped; Paris suffered probably in consequence of a temporary supply of highly-polluted water; while Naples owed its losses to a soil impregnated with sewage, filthy habitations, and foul water. Mr. Hart considers the prevalence of typhoid as the best index of the danger from cholera.

In this connection we cannot pass over the recent paper by Rud. Emmerich, of Munich (Pettenkofer's "Archives of Hygiene," vol. ii. part iv.), which embodies the observations made by the author during the recent epidemic in Naples. Dr. Emmerich regards it as absolutely established that cholera is not contagious in the sense that smallpox or yellow fever is, and in support of this view refers to a hospital in Naples, located in the infected district, in which twelve hundred cholera cases were treated and only one attendant took the disease. He regards the general opinion that the disease was distributed by the drinking-water as unsound, and points out that in Naples the virulence of the epidemic did not correspond with any particular water-supply.

METALLIC POISONS IN ARTICLES OF FOOD AND CLOTHING.

Public attention has recently been reattracted to this topic by the elaborate report made by the chemists of the Massachusetts State Board of Health, Lunacy, and Charity. Dr. Edward S. Wood presents a special Report on "Arsenic as a Domestic Poison," detailing the results of the examination of wall paper and glazed papers for kindergarten uses. Quantitative analyses were made in many cases, and slips representing some thirty-six specimens were appended to the report, with a tabulated statement of the analytical results. The quantities vary from half a grain to as much as fifty-six grains to the square yard, the latter quantity having been found in a sample of kindergarten paper.

At the London Hygiene Exhibition one of the exhibits was a drawing representing a cutaneous eruption said to have been caused by a stocking dyed with an aniline color. The exhibit produced much public discussion, especially through the columns of the *London Times.* One enthusiastic

cochineal-dealer asks for the total prohibition of the use of aniline colors. The matter has been taken up by Mr. Levenstein, President of the Manchester Branch of the Society of Chemical Industry, one of the officers of which has shown that it is not demonstrated that the stocking was dyed with an aniline color, and that a cry for a return to natural dyes means nothing of advantage for the public, because cochineal and madder require metallic mordants in their use. Mr. Levenstein says, "Although the question of the poisonous effects of aniline dyes has cropped up from time to time, notwithstanding the most careful investigation it has never been proved in any case that an eruption was due to their use. The only coal-tar color which was found to irritate the skin was an orange color, which is not an aniline dye proper and has long been superseded by harmless naphthol oranges.

"The charge that arsenic is used in the manufacture of aniline dyes is true only of magenta. It appears that even under careless manipulation not more than one-sixteenth of a grain of arsenic can remain in a pair of stockings; and, as this is in a particularly insoluble form, it can hardly be regarded as dangerous."

POISONOUS CANDIES.

About the beginning of the holiday season considerable excitement was created in New York City by the wholesale confiscation of candies under the claim that they were colored by injurious substances. The official statements of the results of the analyses are not at hand, and it is impossible to judge from newspaper reports as to how far public health was at stake. There is no necessity for the use of any poisonous colors in candy. Manufacturers of confectioners' materials now furnish brilliant organic colors free from danger.

LEAD-POISONING FROM WARM-WATER PIPES.

Poisoning by lead in water is so uncommon in Philadelphia that a recent case has some special interest. A baker's family became subject to symptoms which were recognized by the physician, Dr. Berlet, as due to lead, but for a long while he was unable to trace the source. Articles of food were examined without success. Finally the drinking-water was examined, and it was found contaminated with lead derived from contact with lead pipe connected with the hot-water apparatus. It is not unlikely that lead was, in part, in suspension in the water.

ANTISEPTIC PROPERTIES OF CARBON DISULPHIDE.

Carbon disulphide is soluble in water to the extent of from two to three parts per million at ordinary temperatures. This solution can easily be obtained by agitation. Both alone and in aqueous solution the disulphide arrests fermentation, kills microbes, and is one of the most energetic of antiseptics. A solution in alcohol is easily decomposed.

One observer states that during twenty years' experience among workmen continually exposed to the vapor of this substance he never observed any paralysis or loss of virility. When breathed in certain proportions, the vapor produces anæsthetic effects, with an after-effect of headache. When applied to the skin it produces pain like that of scalding, but no ulceration occurs, and the effect ceases when the liquid is volatilized. The substance has been recommended both externally and internally, in spray and aqueous solution, in cases of cholera and typhoid fever.

REGULATION OF THE SALE OF CARBONATED WATERS.

The Board of Health of New York has promulgated the following order as a section of the Sanitary Code:

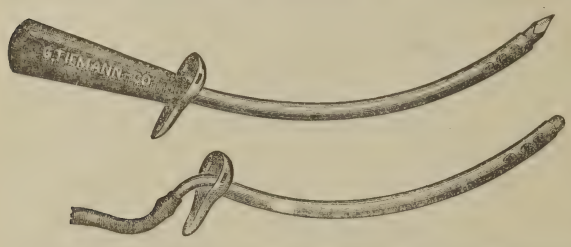
"In the sale of, or keeping for sale, any beverage or drink, no person shall keep or use any tap, faucet, tank, fountain, or vessel, or any pipe or conduit in connection therewith, which shall be composed of or made with brass, lead, copper, or other metal or metallic substance that is or will be affected by liquids so that dangerous, unwholesome, or deleterious compounds are formed therein or thereby, or such that beer, soda-water, syrups, or other liquid, or any other beverage, drink, or flavoring material drawn therefrom, shall be unwholesome, dangerous, or detrimental to health."

This applies elsewhere as well as in New York, and should be adopted by other communities.

DIPHTHERIA.—Chinoline, one of the most actively antiseptic agents at our command, has been utilized as a local application to diphtheritic membrane. It may be used in combination with glycerin. Donath reports very favorable effects from its use upon the local manifestations of the disease.

AN IMPROVED TROCAR AND CANULA.

DR. W. THORNTON PARKER, in connection with the account of a case of impassable stricture of the urethra,* has recently published a description of a form of trocar and canula which possesses some especial advantages. Its construction is readily understood from the cut (kindly furnished by Tiemann & Co.).



Dr. Parker considers it very useful, and superior to any other he has yet been able to find. It can be made in any size, and the curve can be greater, or, if desired, it can be made perfectly straight. The trocar, of course, differs in no respect from those in general use, and the canula is very similar; but after the trocar has been removed, the puncture having been completed, a third piece is introduced into the canula, projecting a little beyond its inner opening to protect the soft parts from being wounded by sharp edges. The lateral openings in the inner canula (which is closed at its end) correspond with the lateral openings in the true canula. The fluid to be evacuated escapes through the inner canula, and is conveyed to a receptacle by a rubber tube. This tube is easily compressed by a spring or common clothes-pin and the flow of the liquid regulated. The person of the patient and the bedclothing are protected from the escaping fluid, and the operation is altogether more satisfactory by using this apparatus. The mouth of the true canula is kept in place by adhesive plaster. It will be readily seen that the dangers of wounding the viscera are reduced to a minimum by this method. The instrument will be found useful for all operations where a trocar is needed, and is in some respects superior to the Fitch's dome trocar.

"THE PHYSICIAN HIMSELF," by Dr. Cathell, will shortly appear in its fourth edition, greatly enlarged and improved.

* Virginia Medical Monthly, December, 1884.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

CLINIC OF JOHN ASHHURST, JR., M.D.,
Professor of Clinical Surgery in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

FIBRO-LIPOMA OF THE THIGH.

GENTLEMEN,—The first case which I shall show you is rather a surgical curiosity than anything else. This man has an enormous tumor of the thigh, reaching from the knee to the groin. The history is that while serving in the cavalry during the war he received an injury to the thigh, and that the irritation was continued by the pommel of the saddle pressing against the bruised part. A small tumor soon made its appearance, and has been steadily growing for the last fifteen years, until it has now acquired the enormous dimensions which you see. It is a very heavy tumor, as I determine by lifting it with my hands. It is not at all adherent to the bone, and the skin over it is entirely movable. There is, therefore, every reason to believe that it is a non-malignant growth. The history that it has lasted for fifteen years without producing involvement of the constitution points to the same conclusion.

This is probably a fibro-cellular tumor with a considerable development of fat, and might be called a fibro-lipoma. It might possibly be a myxoma, for myxomatous tumors are occasionally met with in the cellular tissue, but I have never known a myxoma to acquire the size which this growth presents. The greater part of this mass is probably composed of fat, with firm interlacing bands, and with hypertrophy of the fibro-cellular and areolar tissue. It is a connective-tissue tumor, and when it occurs as a smaller growth we recognize it as an ordinary wen.

In regard to the question of operation: there could be no difficulty anatomically in removing this tumor. It is superficial, and not attached to the bone. An operation of this magnitude would, of course, cause a certain amount of shock and hemorrhage from smaller vessels. If the operation should be attempted, it would be wise to adopt every precaution for diminishing the bulk of the tumor, as is done in the cases of a somewhat similar character

which are met with in the scrotum, and which constitute one form of elephantiasis of that part. In these cases, which are rare in this country but very common in India, the practice is to have the tumor elevated on a platform and suspended in such a way that the fluids shall drain out of it for several hours before the operation. Some plan of that kind might be adopted in this case. The growth extends so high into the groin that it would be impossible to use the Esmarch apparatus; but the elastic bandage might be applied previous to the operation, to diminish the vascularity of the growth.

The patient does not wish to have any operation performed, but I am glad to have had the opportunity of showing the case to you, for it is one that you will not often see.

EPITHELIOMA OF THE LEG: AMPUTATION.

The next case is one of another form of morbid growth of which you have seen several examples. It is that form of epithelioma which originates in long-standing ulceration. The patient is an adult who received an injury to the leg during the late civil war. I believe that the wound at first healed, but then re-ulcerated, and it has now been a long time since the wound has been closed. While the ulceration has continued, other features have developed, and the granulations have assumed an appearance which we recognize as that of the so-called warty ulcer. Those of you who are near can see that these are not the granulations of ordinary ulceration. There is special exuberance and a decided enlargement in the line of the fibula, and the inference is that there has been implication of the bone in the morbid process.

In a case of this kind nothing short of removal of the limb is of avail. In the early stages something can often be done by the use of ice and dressings of bismuth. The late Mr. Colles, of Dublin, who gave a very good account of this affection, reported several cases in which a cure had been effected in this manner. When the disease is of such long standing and has extended so far as in this case, implicating the bone, there is no advantage in anything short of amputation. This may be done with a good prospect of curing the disease. Of course there is risk to life in an operation of this kind, but if the patient recovers there is not much probability of the disease returning.

There is no form of carcinoma in which the prognosis is more favorable than in this variety of epithelioma originating in old ulcers. This same tendency to the development of cancer in the seat of chronic inflammation is seen in the formation of epithelial cancer of the lip in places where there has been a crack or fissure of long standing.

I shall remove the leg at the junction of the middle and upper thirds. In order to avoid as much as possible the loss of blood, I use the Esmarch apparatus and also a tourniquet. The tourniquet is first applied loosely, and then the limb is rendered bloodless by the rubber bandage and the tube is applied. After the limb is removed, the larger vessels and those which reveal themselves by their pouting mouths are secured, and then the tourniquet is tightened and the tube removed. If the tube alone is employed, there is apt to be free capillary oozing, because the vaso-motor nerves are temporarily paralyzed. By the use of the tourniquet the force of the circulation is kept off until the nerves have had an opportunity to regain their tone and the vessels have again contracted.

In applying the tourniquet to the femoral or other large artery, I usually make a firm pad by folding a bandage on itself several times and apply this over the artery in the line of its axis. This is secured to the limb with two or three turns of the roller, and the remainder of the bandage is laid obliquely on the pad. This prevents slipping, and if the first pad has not been applied directly over the artery the second will secure the vessel.

The operation which I propose to do today is what is termed the external flap operation, which makes the best stump in the upper part of the leg. It is done in this way: an incision four inches long is made along the *inner* border of the tibia; the wound gaping, the tissues are transfixed at the *outer* edge of the bone, and the external flap is cut from within outwards. The internal flap is cut from without inwards, the muscles being cut at the highest point of attachment. The knife is next passed between the bones, and a retractor then introduced and the bones sawed. I endeavor to make the fibula about one-fourth of an inch shorter than the tibia, as I think that this makes a better

stump. In order to do this, the fibula has to be sawn from below upwards. As you see, there is troublesome bleeding from one vessel, which I secure with an acupressure-needle by the second method, passing a needle beneath the vessel and a loop of wire above it and twisting the two together. Where the vessel is retracted this is sometimes the most satisfactory way of controlling the bleeding. The flaps are brought together with silver-wire sutures and supported by adhesive strips. A piece of lint saturated with laudanum is next applied, and over this is placed a piece of oiled silk held in position by a bandage. The leg is elevated on a pillow, and the patient sent to the ward.

In this method of operating, the principal flap is the external one. It is a mistake to suppose that there is no advantage in having muscular tissue in the flap. Although the muscle shrinks until it appears as though the bone were covered only by the skin, the fibrous tissue and the sheath of the muscle remain, and this makes a much firmer envelope for the bone than can be obtained from the skin alone. Wherever it is possible to do so, it is desirable to have muscle over the end of the bone.

AMPUTATION OF THE PENIS FOR CANCER.

The next operation is an amputation of more rarity. This man is 47 years of age, and has had a sore on his penis for nearly two years. This has gradually become worse, and has been followed by great thickening and hardening of the organ. Not only is the glans penis affected, but the greater part of the body of the organ is also involved. Small glands are detected in both groins, but these are not more distinct than is often found in healthy individuals, and there is no reason to suppose that the disease has extended beyond the penis itself. He has been treated in the country, I am sorry to say, for chancre, his physician not recognizing the nature of the case. Had he been operated on at an earlier period, the result would have been more promising; but there is still enough tissue left to make a stump.

Where the penis has to be removed at the pubes, it is probably best done with the écraseur; but where enough tissue is left from which to make a flap, it is, I think, better to use the knife. The skin is divided by a circular incision and dissected back, and the organ cut through, the urethra being left a little longer than the rest. The urethra is then to be split and its mucous membrane attached to the skin of the penis. This is the operation which I shall do in this case.

Although the disease is apt to recur, yet a great deal of comfort is afforded to the patient by the removal of the primary disease, for this is a very unpleasant part of the body in which to have cancer develop. If the disease recurs in the glands of the groin, it is much less painful and much less distressing to the patient. It is, therefore, justifiable to remove the penis for epithelioma even at a late period, and even if the surgeon is satisfied that the disease will recur. I have done the operation even when the glands of the groin were involved, simply with the object of giving the patient the comfort which the operation affords.

TRANSLATIONS.

KIDNEY-DISEASE DEPENDENT UPON EPITHELIOMA UTERI.—In the *Annales des Maladies des Organes Génito-urinaires* a very interesting communication is published by M. Lancereaux, based upon twenty-three cases of epithelioma uteri in which the condition of the kidneys was especially studied. The uterus is the site of three varieties of epithelioma in connection with its three different varieties of epithelium existing in its interior. The most common variety, and the one most frequently associated with renal disease, is cancer of the pavement epithelium. The extension of the disease to the contiguous portion of the bas-fond of the bladder, so often observed, is shown by frequent and painful micturition, possibly by albuminous and bloody urine; and also by general symptoms, such as vomiting, diarrhœa, and loss of appetite. These symptoms are recognized as those of uræmia, and, according to the author, they are so frequent in the course of epithelioma of the neck that their absence is exceptional. Cerebral evidences of uræmia are presented by headache, insomnia, sometimes delirium, often death by coma. Dyspnœa is rare. In all cases there is usually a lowering of bodily temperature of one or two degrees. Evidences of renal insufficiency make their appearance soon after the development of the uterine disease, and often within the first year.

The lesions observed are (1) primitive and (2) secondary. The primitive lesions of the urinary passages are due to the direct extension of the disease from the uterus and vagina and the lymphatic vessels to the bladder and the ureters; they also may be found in some cases in the rectum, the peritoneum, and the nerves of the pelvis. The secondary lesions are those due to extension of the disease from the bladder to the ureters, the pelves, and even the kidneys themselves. Tertiary lesions might be classified as those depending upon the latter disorders. They consist in changes in the digestive tract, and of the heart according to certain authors.

The lesions caused by invasion of the bladder are well known, and need not be repeated. The author describes as follows the effects upon the ureters and kidneys. The ureters involved by the epithelial vegetation, or even compressed and retracted at their termination, retain the urine, which distends them until finally they may be so enlarged in their calibre as to resemble small intestine. The pelves and calices, proportionately enlarged and also more or less distended, may form under the kidneys a collection of fluid as large as an egg (hydronephrosis). The papillary extremities of the Malpighian pyramids are next effaced, and often atrophied. The kidneys, always modified in their structure, present different degrees of alteration, from tumefaction to advanced interstitial nephritis and contracted kidney.

Lancereaux denies that hypertrophy of the heart occurs in these cases of uterine cancer; in twenty-three cases of this secondary nephritis the heart was found to be normal or diminished in twenty; in three the heart was enlarged owing to special causes that were present (dilatation of the aorta or general arterial dilatation).

This contribution directs attention to a subject which has been insufficiently studied, and throws light upon obscure symptoms occurring in the course of malignant disease of the uterus.—*La France Médicale*, February 7, 1885.

Fatal Results after Trephining—Effects of Traumatism upon Cerebral Growths.—A paper, by M. Krimisson, of considerable importance was presented to the Société de Chirurgie at its meeting in Paris, February 4. It was based upon a clinical report of a case of a child who struck its head in falling, without external injury. There was no wound and no loss of consciousness; but in a few moments there was noticed contracture of the jaw-muscles; a week later there was paresis of the left arm and deviation of the face; subsequently the left leg became affected. Six months afterwards there were local headache, vomiting, and muscular contracture. Trephining revealed healthy bone and dura mater. The operation was useless, and death occurred the next day. At the autopsy there was found no evidence of traumatism of bone or encephalon, but deep in the right hemisphere was a tumor as large as an egg, springing from the side of the base. Microscopically, the tumor was found to be tubercular, without bacilli.

The author cited an analogous case of Hulke, whose patient also died after trephining, in which the autopsy showed four yellowish nodules in the cerebral hemisphere. The morbid growth was thought to be independent of the traumatism, because the symptoms appeared too soon after the fall to be more than a coincidence: the fall seemed at the most merely to accelerate the appearance of the symptoms of the cerebral tumor. Two observations by MacEwen were cited to show the effects of traumatism in determining the explosion of serious cerebral disorder within a few hours after the receipt of the injury. A very interesting consideration of the medico-legal aspects of such cases concludes this valuable paper. —*La France Médicale*, February 7, 1885.

Excision of Redundant Scrotum for Varicocele.—The surgical treatment of varicocele by excision of part of the scrotum, which was practised by Sir Astley Cooper, and quite recently by Dr. Henry, of New York, and Dr. Levis, of Philadelphia, has been brought before the French Academy of Medicine by M. Horteloup, who also presented an instrument for the performance of the operation. The curved clamp which M. Horteloup employs is evidently intended to accomplish the same results as Henry's clamp, which the reporter apparently overlooked. To antiseptic precautions principally does the author attribute his successful results, not one of his cases having died, and only three had hemorrhages into the scrotum.—*La France Médicale*, No. 24.

PHILADELPHIA

MEDICAL TIMES.

PHILADELPHIA, MARCH 21, 1885.

EDITORIAL.

IDIOPATHIC ANÆMIA OF ADDISON.

THIS disease, more generally known by the name of progressive pernicious anæmia, applied to it by Biermer in 1871, was first described in 1855 by Addison, in his famous treatise "On the Constitutional and Local Effects of Disease of the Suprarenal Capsules." It was while engaged in the study of this form of anæmia that Addison, to use his own words, "stumbled upon" the discovery of the affection termed by him melasma suprarenale, with which his name will be ever associated. It was the fortunate lot of Addison to stumble upon "no less than four morbid conditions before unrecognized or imperfectly described: xanthelasma, described by himself and Dr. Gull under the name vitiligoidea; keloid, or morphœa, which, as Dr. Fagge has shown, is closely allied to or identical with scleroderma; idiopathic anæmia; and melasma suprarenale."*

Before the publication of Addison's treatise several isolated cases of this fatal form of anæmia were reported, of which the earliest, as shown by Dr. Pye-Smith, is probably that of Drs. Combe and Kellie, which appeared in the Transactions of the Medico-Chirurgical Society of Edinburgh for 1823.

The disease differs from most others in being absolutely devoid of lesions except such as are secondary to the altered condition of the blood. Among these the most prominent are fatty degeneration of the heart, liver, glandular epithelium, especially of the gastric tubules and of the intima of the arteries, hemorrhages in the retina (first described by Biermer) as well as in the corona radiata and on the cerebral surface, sometimes in the form of a hemorrhagic pachymeningitis. In genuine cases of idiopathic anæmia the organs universally recognized as hæmatopoietic—namely, the lympharia, spleen, and bone-marrow—are unaltered. It follows, therefore, either that there are cytogenic organs of the very existence of which we are ignorant, or that in idiopathic anæmia there is an abnormal destruction of red corpuscles. Certain facts favor the latter view. Among them are the deep color of the urine often observed when the red corpuscles are markedly deficient in number, the dark-red color of the muscles, the dark hue of liver, spleen, kidneys, and pancreas, and the unusually yellow color of the subcutaneous fat.

The red corpuscles are often greatly increased in size, varying from four to eleven or even fifteen micro-millimetres, the average in health being eight and a half. "Those of large size were much more numerous than the smaller, and, in consequence, the blood in this disease presents a remarkable and characteristic peculiarity,—namely, that the reduction in the number of the corpuscles is greater than that in the quantity of hæmoglobin; so that the value of the corpuscles is greater than normal. In this respect it differs from all other forms of anæmia, since in these the value of the corpuscles either is unaltered or is below normal."†

Unfortunately for diagnostic purposes, this increased size of the red corpuscles is not constant in idiopathic anæmia; neither is the presence of microcytes, minute red corpuscles, nor altered shape of the red corpuscles, poikilocytosis. The writer has observed both of these peculiarities in a case of anæmia splenica.

* Idiopathic Anæmia of Addison. By Dr. Pye-Smith. Guy's Hospital Reports, 1883.

† Review of Laache on Anæmia in Dublin Jour. Med. Sci., July, 1883.

If, in a case of anæmia, a count of the red corpuscles shows their number to be below one million per cubic millimetre, and the white not absolutely increased, and there is no disease of any tissue or organ of the body, the case is probably one of idiopathic anæmia. If, in addition, many of the red corpuscles are enlarged to such an extent that the average value in hæmoglobin of each, as tested by the hæmochromometer, is as great as or greater than normal, the diagnosis is certain.

The etiology of idiopathic anæmia is quite as obscure as its pathology. The influence of depressing emotion appears, however, to be manifest, especially when it is sudden and violent. This was first pointed out by Wilks, and was illustrated by some remarkable cases reported by Dr. R. G. Curtin at a recent meeting of the Philadelphia County Medical Society. Exception may be taken to Dr. Curtin's cases because in none of them was there an examination of the blood or a necropsy, but clinically they present every evidence of being genuine cases of idiopathic anæmia.

Since arsenic was used in the treatment of this disease by Dr. Byrom Bramwell, the term pernicious has become less appropriate than when first employed by Biermer. A number of recoveries have been reported in which this remedy was exhibited at a late stage of the disorder. Iron, the main stay in the treatment of chlorosis, is of little or no benefit in idiopathic anæmia, and their different behavior towards this remedy constitutes the principal distinguishing mark between the two diseases, which in all other respects are remarkably similar.

THE Transactions of the College of Physicians of Philadelphia will appear regularly hereafter in our pages, in consequence of an arrangement made with the Publication Committee of the College.

ERGOT.

THE fact that preparations of ergot, when administered during labor, do not always yield uniform results has engaged the attention and stimulated the researches of both physicians and clinicians. The attention of investigators has been given especially to the study of the chemistry of ergot to determine, if possible, the principle upon which the activity of the drug depends. Following Dragendorff, the profession regarded sclerotinic acid as the active constituent of ergot, but recently Kobert has, as the result of numerous experiments, reached the conclusion that the active principles of ergot are ergotin acid, sphacelin acid, and cornutin. Of these the ergotin acid seems identical with sclerotinic acid, which Kobert claims has no ecbolic action, and indeed no action whatever upon the uterus. On the other hand, sphacelin acid produces, it is believed, tetanic but not peristaltic contractions of the uterus; it also stimulates the vaso-motor centre, and in toxic doses produces gangrene, ulceration of Peyer's patches, ataxia, and paresis. The third substance, cornutin, is allied chemically with ergotinin, but is strongly poisonous, producing convulsions in animals, and causing a rise in blood-pressure by stimulating the vaso-motor centre without directly affecting the heart. It produces irregular peristaltic contractions of the uterus, but not tonic contraction, and is considered the agent causing convulsive ergotism.

It is difficult to reconcile the statements of different observers with regard to the physiological effects of the constituents of ergot. Possibly the agent of greatest activity is of the nature of a ferment, for it is known that old preparations of ergot are less efficient than recent ones. If such be the case, then the fresh, crude drug, or some recent preparation like the wine or dialysate, made without heat, might, after all, offer the best form for administration.

THE CASE OF GENERAL GRANT.

THE sympathy of the entire nation is with General Grant in his sick-chamber, but, the diagnosis of squamous epithelioma of the fauces and tongue in its early stage having been announced, it does not follow that the distinguished patient is necessarily doomed to speedy death with malignant disease. The physicians in charge of his case are, fortunately, of the highest standing in the profession, and he will undoubtedly receive the full benefit of the extended resources of modern medicine. In the mean time, we hope that frequent and detailed bulletins of the case in medical journals, as well as in the daily press, will be strongly discountenanced by the attending and consulting physicians, for reasons that must be obvious. [Code of Ethics, Sec. 1, Art. I., ¶ 2; also Sec. 2, Art. I., ¶ 3.]

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

A YOUNG Philadelphia surgeon has lately received high honors in Belgium. His name is Francis W. Strain, a graduate of Jefferson Medical College and surgeon of one of the steamers of the Red Star Line, "The Nordland." He lately removed a tumor from the face of a lady who is one of the near relatives to the King of Belgium. In recognition of his skill, the young surgeon has been elected a member of the Royal Society of Surgeons of Belgium and has been presented with a royal gold medal which has attached to it a fac-simile of King Leopold's crown.

M. de Lesseps has been writing some of his usual silly letters to the Paris press, giving his ideas of the war in the Soudan (a place he never saw, as he has never been higher up in Egypt than Suez). He made a statement that interests us as physiologists. "The English will never be able to bring the Egyptians under subjection," he says, and gives as a reason that, "by a bizarre caprice of nature, the Fellaheen women can only conceive with Fellaheen men! Never during the works on the canal did a Fellaheen woman have a child by her European consort."

This is rank nonsense. During a residence of two years in Egypt the writer of this letter had some experience with just this sort of marriages, and he noticed in several cases (of which he could readily give the names and position) that, on the contrary, when Fellaheen women are married to Englishmen and other Europeans they become unusually prolific. One had no less than seven children by an English husband.

A most extraordinary suit at law has just occupied the Paris Court of Justice. A M. Bouhyer was the plaintiff, and Prof. Trélat (the great surgeon of the Charity), Dr. Delens, and Dr. Piogey were the defendants. Some time back the patient was admitted to the hospital suffering with infectious lymphangitis, caused by a wound in the thumb from a rusty nail. He was, besides, in a high state of fever, and haunted with the idea that he was being robbed and murdered. The house-surgeon had a good deal of trouble with him, and went to considerable pains to get him well. Prof. Trélat treated him, and after a good deal of trouble brought him around. He got well, and was discharged.

No sooner, however, out of the hospital than he brought an action against all the doctors and surgeons for having practised useless and dangerous operations on him without his consent. He therefore claimed three thousand francs damages. The witnesses brought forward were his fellow-patients at the time, who one and all stated that he had received constant care and devoted attention from all the doctors. Dr. Trélat made a witty defence, saying, "We cannot expect our patients to compel us to exact a duly-certified deed from them before they consent to have their pulses felt, or even a written and signed consent or certificate of their willingness to submit to a lancet-thrust." The doctors defendants, having been put to great trouble and annoyance over the affair, put up a counter-claim of three thousand francs.

The court found for them, *with three thousand francs each*, so that M. Bouhyer will find that his sojourn and treatment in a hospital will entail rather high fees, in all nine thousand francs and the costs. He is the editor of a financial paper. Like many others, he took advantage of the ease with which one can get into a hospital here and have the best advice for nothing.

Dr. Sandras has communicated to the Academy of Medicine a formula which he claims has produced some very remarkable effects on the voice. It is as follows:

Essence of turpentine, 100 grams;
Norway tar, 20 grams;
Chloroform, 1 gram.

Used by inhalation. After its use for a time, it was noticed that the voice became extremely pure and possessed a remarkable volume.

The subject of the depopulation of France has been attracting much attention lately. Prof. Hardy, in speaking of the fact that the

French are not a prolific people, took for example the Paris Faculty of Medicine, which consists of some thirty-four members. Five of them, he said, were single, so he could not speak as to their fecundity. Nine of the remaining had no children at all, although he felt sure they would like to have had them. Of the other twenty, some had one, others two, but only one had a large number (seven); but this exception confirms the rule, as the one in question was of English origin (Prof. Ball). The farther we get from the animal the smaller the number of children. As the French are the nation the highest in civilization, consequently they do not have many children. Q. E. D.

The name of the eminent Professor of Histology, Ch. Robin, is well known in America, as it is in all our works on Physiology. Personally he is not at all popular. In his lectures he presents his already dry subject in a very uninviting manner. This, coupled with the facts that he has gone into politics of late years and was lately elected Senator, and that he is very severe in examinations, has just brought about one of those peculiar "manifestations" of the Paris medical students against him. When he appeared at his usual Monday lecture last week, he was met with a crowded lecture-room (a most unusual thing), and on attempting to start his lecture with the usual "Gentlemen, I said to you in my last," the students shouted, "Resign!" "Resign!" "Go to the Senate!" After several attempts to go on in the midst of an uproar, he was compelled to retire in haste, leaving the students masters of the field. They then quietly withdrew, singing one of their favorite songs. Notice was placed on the board that Prof. Robin would give no more lectures this session, and it is now announced that he will resign.

There was an error in my last letter, speaking of Dr. Debove's treatment of sciatica with *ether*. It should be with *chloride of methyl*, as ether he found to be a failure. The chloride of methyl is sprayed along the course of the nerve, and as the surface gets white the spray is carried to adjoining parts. It is used just long enough to congeal the skin, no second application to be made until the skin has become firm again. Obesity is not a contra-indication, but of course it will take longer to freeze the part and the vesication will be longer healing. Some remarkable successes have been obtained here from its use.

Dr. Tillaux, in opening his clinical lectures at the Hôtel-Dieu, gives some good advice, some of which is aimed at the present medical faculty's method of forcing the students to devote the first year of their studies to botany, physics, and chemistry, their second year to dissection only, and then on the last two sessions they are allowed to frequent the hospitals, which Dr. Tillaux and other teachers outside of the school do not think is right. They feel that it is not needed to study all these different branches and also pathology before commencing to see disease, but that they study their pathology much better by seeing the maladies as they study them. Dr. Tillaux finds that his students will go home at night and study the dryest kind of even rare pathological cases if they see an instance of it first in the hospital. They will even industriously hunt up for him all the authorities and cases of the malady in the great medical reading-rooms of Paris. Diagnosis, he thinks, should be taught by *deduction*. It was in this way that Nélaton taught. When Dr. Tillaux was Nélaton's interne, he gave him a precept that has never been published. It was this: "When, in the examination of a patient, you notice a symptom that does not accord with the other symptoms, attach yourself to it. Don't neglect it, and it will very often lead you to a correct diagnosis." Dr. Tillaux spoke very highly of the mode of dressing wounds, called Guérin's system, now so much used in all the Paris hospitals, which consists in completely covering all wounds and all open sores with a thick wad of antiseptic cotton, designed to filter the air and arrest on their passage the famous microbes and all other ferments of purulent infection.

Sulphate of Cinchonamine.—This cinchonamine comes from the *Remigia*, of which the bark has often been used to adulterate the real cinchona bark. Prof. G. Sée has been studying the action of this bark on various animals. The results from his experiments so far show that the sulphate of cinchonamine acts in a most remarkable manner on the heart. It slows its movement and diminishes the vascular pressure, then finishes by stopping the heart in diastole, thus differing from every other heart-remedy. It will soon be tried in various heart-troubles, and we will report results.

Dr. Després, at Charity Hospital, remarking upon a case of polypus before operating, said, "These polypi are often divided into those inside and those outside the uterine cavity. Some surgeons are in favor of waiting until they protrude partly, and others advise to operate at once. I am rather in favor of waiting as long as possible, as I do not like to dilate the uterine cervix, which, as it was formerly done, was really a rather dangerous proceeding, though now it is much less so, as the former sponge tents prepared with wax are almost abandoned for the tents made of laminaria, which leave an open space in the middle to permit any liquids to drain away. The polypus will eventually dilate the organ itself if allowed to do so; so that, as a rule, there is no need of haste unless the hemorrhage become very great. I

do not approve of the use of ergotin, as it will only contract the cervix more. When the hemorrhage is slight, it can almost always be controlled by the administration of strong black coffee. This may be given every fifteen minutes in half-cup doses up to five of them. It may give rise to some excitement and even slight palpitations, but this can be disregarded if the hemorrhage is relieved.

"As to the operation, the most simple means is the best, but the usual plan of seizing the tumor with the long volsella forceps is not the best plan by any means. Attempts at torsion and traction, when severe, often require the repetition of the whole performance over again under most disadvantageous circumstances. All lengthy manipulations carried on *in utero* are dangerous. I place the patient on her *right side*, and make use of an American speculum (Sims'), which allows me to see what I am doing. Upon introducing the finger I feel that the polypus is partly out, and one would think that I had only to drag it out at once, but I will not attempt to do so. I have here a little hook which is smaller than my finger (it is used for vesico-vaginal fistulas). This I hook carefully into the polypus, which I find gives way readily, but I do not make traction. I now introduce, sliding it carefully up along the little hook, the 'wire-rope écraseur,' stopping whenever I find any resistance. It is now about six centimetres in above the cervix, which indicates to me that I am near the uterine walls. I now make steady traction and screw tightly, cutting the pedicle, thus bringing away all the polypus and terminating the operation."

The patient, put to bed, was treated with this injection:

Chloride of zinc, 5 grams;
Aqua pura, 500 grams. M.
Fiat sol.

This was used for the first day only. Afterwards she had six injections of warm water daily, and left the hospital cured in two weeks. It may be stated that this polypus was an *intermittent one*, as on resting in bed it would disappear within the cervix, which would close on it and all discharge cease, but on resuming active employment it would again begin to give trouble.

The American drug *Rhamnus Purshiana* (*Cascara sagrada*, as it is often called) has lately been the subject of considerable investigation in France. Prof. Grasset, of the Montpellier faculty, and others have made a series of experiments with it, with the result that while they do not entirely confirm the opinion of Dr. Emeri that it is a specific for *all* cases of habitual constipation, still they find that it is a most valuable laxative, and assert that certainly there does not exist a remedy that is as efficacious in the treatment of chronic constipation. It is given here in *cachets* containing twenty-five centigrammes of the bark in powder. One is often enough, but two or three are given when needed. It produces in five hours stools that are nearly always consistent. It is claimed also that it will influence the menstrual function.

Prof. Trélat made some remarks upon malignant growths in the mammary glands, which, if not quite new, still embody important truths. He presented a case at his clinic recently of a woman about 41 years of age. He stated that four months before she had noticed a small tumor just under the skin, and quite mobile, at first painless, but within the past two months she had noticed from time to time lancinating pains, particularly at the monthly period. The tumor was still somewhat movable, but was about contracting adhesions to the skin, and an exploration of the axillary space showed a ganglionic chain extending to the breast, like a small, hard cord.

Prof. Trélat remarked, "We are here in face of an inexorable affection for which medicine can do absolutely nothing. What ought we to do? I said that four-fifths of them have a relapse after operation. Well, that is already a notable improvement over that of medicine, which lets them all die! and now, with our new, improved system of surgery, we can show that our mortality-rate from these operations is only three to five per cent. To come at once to the point: in these tumors it is our duty *to operate*, for three convincing reasons: 1. Because the operation of itself only gives rise to a very small mortality. 2. Because the patients are reasonably sure to live much longer than those not operated upon. 3. Because a certain number of them will be cured by the operation. Cure is possible, then, but how? You must *always take off the whole of the gland*. If it adhere to the aponeurosis, take that off also, even if you take along some of the fibres of the pectoralis major. Then at the slightest suspicion of the ganglia being involved, even if you are not certain of it, empty the whole of the axillary space. In fact, cure will depend on a strict observance of these three rules: *Early diagnosis; prompt operation; complete ablation*. By this means you can at least be reasonably sure of giving the patient prolonged existence, which no other mode of operation will do."

Dr. Debove, at a recent meeting of a medical society, said "that the existence of a hysteric form of fever had been denied by most authors, but that he had observed a certain number of facts that seemed to plead in favor of a contrary opinion. As a rule, when fever is observed in hysterical patients it often is suggested that there is latent tuberculosis which is not appreciable, as the physical signs have not yet been noticed; but this hypothesis cannot be admitted when we have followed a patient for several years and find no signs of phthisis.

"I have attended a young lady for five years, who is now about 24 years of age. She has suffered from hysteria from the age of seven, with all its usual attendants of contracture, paralysis, etc., but outside of these attacks she is quite sensible, and even a very reasonable person. Three years ago she had for the first time an attack of fever, which was characterized by the usual three stages of cold, heat, and sweat. A careful examination furnished not the slightest information as to the cause of the fever. Since then her temperature has been taken regularly every day, and the temperature has never gone lower than 38° (about 100° Fahr.), and it has often gone higher.

"At first I attributed these fever-attacks to malaria, as she had formerly lived in a district in Italy where fever was endemic. I supposed that the *intoxication paludéenne* was the cause, but I was forced to abandon that idea because sulphate of quinine had no effect, and she did not present any other sign of the cachexia. I had also supposed that it might be a tuberculosis which I would see in all its evolutions. I do not need to say that in this case the patient was not one in whom any simulation could be suspected. During one of these attacks, which lasted two weeks, the thermometer oscillated between 40° and 41° C., and the pulse beat 120 to 130 times a minute. There was also cephalalgia. I prescribed antipyrine, and the fever fell at once. However, I do not wish to conclude that this substance was the cause of the cessation of the fever. In presence of these facts, it seems difficult not to admit that there exists in this case real *hysteric fever*. I have before observed such cases, but not long enough to draw conclusions, but the present case is one that has been now for such a long time under observation that I am disposed to admit the existence of such a fever. I cannot see any reason why it should not exist. There is nothing in physiology or pathology to prevent it. Indeed, the very conditions that act on the thermal centres are met with in the hysterical state.

"I also tried to reproduce hysterical fever by suggestion, and made experiments on several subjects of both sexes. I obtained in most of the cases an elevation of temperature that varied from 0.5° to 1.5°. I tried to reproduce also a chill in the same subjects by suggestion, but the results were contradictory. Nevertheless, these experiments should stand as a new argument in favor of hysteric fever."

The following formula is used in hæmatemesis in Paris hospitals:

℞ Acetate of lead, .025 gram;
Opium in powder, .05 gram;
Pulverized sugar, .50 gram. M.

Divide in ten powders, and take one every half-hour.

Dr. Straus, speaking at the meeting of the Medical Society on the non-transmissibility of tuberculosis by vaccine matter, said, "The discovery of the parasite of tuberculosis has brought again to the attention of observers the possibility of the transmission of tuberculose by vaccination. M. Toussaint some years ago vaccinated, with some vaccine matter from a phthisical cow, two animals, which became affected with the disease. This discovery did not stop there, for Dr. Koch's experiments have given renewed interest to these researches. Meyer, of Berlin, revaccinated all the phthisical patients in his service at the hospital. Four of them presented vesicles that were very clear, and their contents were examined by the microscope, but without any results. I have made the same experiments, and the revaccination has succeeded on five of my patients. I spread a part of the contents of the pustules on plates and tried by Ehrlich's method to find the bacilli, but I could not find any. I proceeded at the same time to inoculate another part of the contents of the pustules into the anterior chamber of the eye in several rabbits, but they never became tuberculous. M. Chauveau has just given the Medical Conference at Copenhagen the same results after some experiments of his, and M. Josserand has published at Lyons the results of his efforts, which had the same ending. On summing up these facts, we have some twenty-odd negative experiments of the transmissibility of tuberculosis by vaccine matter under these conditions, and, notwithstanding the cases of M. Toussaint, it seems to me that his experiments lose their value. In any case they are not sufficient to prove that tuberculosis is transmissible during the operation of vaccination under ordinary circumstances. The vaccine used was tried on children mostly, and it is known that they present, by reason of their age, an almost complete immunity from phthisis. Therefore, if we cannot transmit the disease by taking the matter from old phthisical patients, this transmissibility would be even less likely to occur if the vaccinifer were a child. It is, besides, very difficult to inoculate tuberculosis by simply scratching the skin. In order to succeed, the matter has to be injected into the subcutaneous cellular tissue."

Dr. Dujardin-Beaumetz had occasion lately to try the method of treatment of pseudo-membranous bronchitis by a mixture of tar and essence of turpentine in the case of a child 4 years of age, which had an attack of suffocation which left but little hope of saving her. He ordered them to burn in the room a mixture of coal-tar and essence of turpentine. The next day he saw that, following an attack of vomiting, she had thrown up false membranes tubular in shape and black in color. The child rapidly improved and got well. He thinks that the black color proves that the vapors of the mixture really penetrated into the respiratory tract. He does

not believe that they dissolve the membrane, but that they prevent their reproduction. In any case, these vapors are inoffensive. They have only the inconvenience of making everything black in the room, as well as the persons who attend the patient. Some very good results have already been reported from this method of treatment.

For the past year experiments have been going on to meet the demand for a better stethoscope, more adapted to the wants of the student and general practitioner. With the very best so far invented it was felt that only the skilled specialist could be sure of the exact sound he heard. All our modern stethoscopes are at best but acoustic tubes which can only transmit a sound by the column of air that is within them. It is well known that all such transmitted sounds are attenuated. The want, then, was something to augment the sound in place of diminishing it. Starting from that idea, the present stethoscope was invented. The principal part of it is called the *phonogène*, and it is formed of a membrane or a sort of tympanum stretched over the top of a metallic sounding-board or disk, as in a telephone. It is then placed in a hard-rubber receiver, and an ear-piece is attached to it, which is a simple flexible rubber tube and ear-piece (for one ear only). The whole thing is very light. It could be concealed in one hand with the rubber tubing rolled around it.

The sounds given by it are increased, that is, they are sufficiently augmented to be quite distinct, and they are very clear and distinct *without changing the pitch*. A final advantage is its moderate price, three dollars. There are two kinds made. One, made for heart-sounds only, augments the sounds more than the plainer kind used for general auscultation.

There has been quite a revival of the galvano-thermo-cautery in Paris. In the hospitals there is hardly a clinic that passes but that one of the forms are used. Great improvements have been made in them, and they are now constructed in every shape and form, and used for every ill in the world almost. An example of the rage for its use was shown the other day at a clinic, when Prof. Richet burnt quite a little hole in a boy's chin who had an abscess that manifestly came from a bad tooth. But great surgeons are not supposed to know anything about the teeth, and he certainly cured the abscess, even if it did leave a scar. These cauteries are then in constant use for ablations of tumors of the uterus, the tongue, on the eye, and even fistula in ano is now burnt with them. Dr. Péan says he prefers them to a knife ; and he is one of those surgeons who would cut anything when he can. He makes with great success at least one, and often two, ovariotomies every week. While speaking of this, it may be said that these operations are almost never performed at the hospital. Dr. Péan insists on the patients having the operation done at their own houses, be they ever so poor. He prefers that to the hospital, and this is probably one of the reasons for his great success in the operation.

Dr. Besnier, of the St.-Louis Hospital, has made some remarkable cures of lupus of the face with scarifications made with a special form of cautery. Some of them are fork-shaped (like a flat, six-pronged fork), which produces long, profound scars. Others are made to produce points, some single and others from four to eight points, about the size of a pea.

Dr. Desarenes uses a cautery that opens out like a fan in three sections when introduced in the nose or pharynx. He also has others in bulb shape and in flat blades. With them he has had great success in the treatment of chronic catarrhs of the naso-pharyngeal space (post-nasal catarrh). He has lately published a pamphlet on their uses.

A New Apparatus for inducing Anæsthesia.—From a careful observation at the great surgical clinics of Professors Verneuil, Trélat, Tillaux, and others, in regard to the means used for anæsthesia, it is observed to be *always chloroform*. (It is taught here that ether is dangerous from its *inflammable* and *explosive* qualities.) They very often have trouble with their patients, who, when they do not, at least all have a very dark, cyanosed appearance, and they are almost always obliged to use tongue-forceps or even adopt other means to keep the respiration going.

On the contrary, at Dr. Péan's clinic, where he always does some very important operations and a large number, say ten to a dozen, of smaller operations, the patients all sleep quietly, and there is not the slightest discoloration of the face. There is rarely any excited stage, even with drunkards and nervous women, and never any trouble of any kind. Yet it is chloroform, but given according to Prof. Paul Bert's method with a machine invented by Dr. Dubois. This machine gives accurate doses of chloroform and air. It is not new, of course, to give measured doses of chloroform and air. This was attempted some years ago in Boston with some sort of gauged bottles, and other methods have been tried similar to the gasometers of the dentists with nitrous oxide, but none of them have established a real mathematical dose so well as this machine that Dr. Péan has now been using over a year. It has been tried in over three hundred cases with entire success. It consists of a small tank about two feet high and wide, that can be placed on a table. The air can be taken into it from the outside, as it is done at the St.-Louis Hospital. The chloroform is measured into it at regular intervals by the aid of small tubes (hollow) that take it up from a wide-mouthed bottle, into which

they pass by a small chain-movement like the old chain-pumps. This is turned by the hand or may be attended by an assistant. The definite admixture of chloroform and air is applied to the face by a mouth-piece like that used for nitrous oxide. There is also a nose-piece, by which the anæsthetic action is kept up during operations on the mouth and palate, etc.

Several tubes, marked with the quantity to be used to each one hundred litres of air, go with each machine. Eight per cent. is the usual proportion used, but more often they commence at eight, then raise it to ten, and then lower again to eight or six. The patients go under it quietly, and are often kept under it an hour. In two hundred cases it varied from ten minutes to eighty minutes: the last was the longest. The worst of the machine is that it costs ninety dollars. This week, however, they have made the first large lot of them, the first being experiments that have been in use now over a year, but with such success that some hundreds have been ordered. THOMAS LINN.

CINCINNATI.

THE Commencement exercises of our three regular medical colleges have all taken place. The Cincinnati College came first, and graduated a class of twenty-five; the Medical College of Ohio followed, with a class of fifty-nine; and last evening the Miami presented diplomas to twenty-seven newly-fledged "doctors."

Prof. Whittaker made a very felicitous valedictory address at the Ohio Medical College commencement. He contrasted the practice of medicine in early times with that of to-day. Then the physician relied on superstition, ignorance, and experience. Now superstition has given way to scepticism, ignorance to knowledge, and experience to experiment. He cited the former fearful ravages of the plague and the futile endeavors to stay it by incantations, then he spoke of the present scientific investigations into the origin of cholera. As a result of modern experimental research he mentioned Koch's discovery of the tubercle-bacillus, and the effect it was likely to have on the prophylaxis of phthisis pulmonalis.

Prof. Langdon, of the Miami College, took for his valedictory theme "Germs," which subject he treated in such a happy manner as to interest both the faculty and the laity. Prof. Langdon has just completed his first year as anatomical lecturer in the college, and has proved a drawing card. While the number of graduates this year is much less than last, the outlook for the coming year is already better.

During the past winter Cincinnati has been visited with an especially grave epidemic of measles. In some instances every child in the family would die in rapid succession, no remedies seeming to influence the course of the disease. The fatal termination has generally been brought about by the supervention of catarrhal pneumonia. Indeed, primary pneumonia has also been unusually fatal and frequent. Two of our prominent physicians, Drs. William Carson and William Clendennin, are now lying very low with this disease. They are among our oldest and best physicians, and have been prominent in college and hospital circles.

At the recent election in the Academy of Medicine, Prof. Samuel Nickles was chosen president. He has filled the chair of Materia Medica in the Medical College of Ohio since Roberts Bartholow was transferred to the chair of Practice. Prof. Nickles is becoming noted for his accurate knowledge of any subject pertaining to medical drugs, in which department he is the acknowledged authority in the Academy. He is an unassuming yet forcible speaker, and possesses the entire respect of the members.

At the last meeting of the Academy Dr. Whittaker reported a case in which obstruction of the bowel had been much benefited by washing out the stomach. Five years ago he reported a like case, the first recorded. Since then it has been practised with curative and palliative effect in this country, and especially in Germany. Dr. Ransohof was inclined to think that it might answer where there was not much the matter, but that the surgeon's knife was the proper way to relieve serious obstruction, and that there should not be too long delay in its use. A. B. T.

MARCH 11, 1885.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held January 7, 1885, the President, Dr. J. M. DA COSTA, in the chair.

Dr. WILLIAM PEPPER presented the specimens from

A CASE OF ADDISON'S DISEASE.

(See page 454).

DISCUSSION.

Dr. FREDERICK P. HENRY remarked that this was undoubtedly a genuine case of Addison's disease, and remarkably free from the frequent complications of that affection. The rarity of Addison's disease in this country may be judged of by the fact that in the eleven volumes of the Transactions of the Pathological Society of Philadelphia there are reports of only two cases, and these were made by Dr. Henry, in whose practice they occurred. They are to be found in vols. v. and x. The specimens from one of the cases are now in the museum of the Episcopal

Hospital. Dr. Hughes's report upon the condition of the blood in this case is very interesting. Most writers upon Addison's disease are accustomed to attribute the profound adynamia so characteristic of the affection to a high degree of general anæmia, in spite of the absence of any facts to support such a theory. This adynamia is due to an insufficient supply of blood, although of good quality, to the supra-diaphragmatic portion of the body, the result of an accumulation of blood in the abdominal blood-vessels caused by vaso-motor paralysis. Free pigment in the blood has only been once before observed, so far as the speaker is aware, by Van den Corput (*Gaz. Hebdomadaire*, 24 Juillet, 1863). The changes observed in the sympathetic ganglia are of undoubted interest, but it must not be forgotten that typical cases of Addison's disease have been observed without perceptible lesion of these ganglia. Eulenberg and Guttmann (*Journal of Mental Science*, January, 1879) have collected twenty cases in which changes were found in the nerves of the supra-renal plexus and the ganglia of the solar plexus, opposed to which they place twelve cases in which careful examination demonstrated no change whatever. The positive observations included fatty degeneration (found by Queckett in one of Addison's original cases), swelling and redness of the nerves of the lesser splanchnic and ganglia of the solar plexus, atrophy, pigmentation of the ganglionic cells, increase of connective tissue in the ganglia and in the neurilemma of the nerve-fibres, and caseation of the semilunar ganglia.

Primary affection of the abdominal sympathetic has been appealed to as a cause of numerous other affections, notably of Bright's disease, by Drs. Da Costa and Longstreth, on the basis of careful microscopic examination of the ganglia in nine cases (*Am. Jour. Med. Sci.*, July, 1880). The accuracy of their description of the condition of the ganglia has been confirmed by Dr. Robert Saundby (*Brit. Med. Jour.*, January 13, 1883), whose observation has been still more extensive (fifteen cases), but he entirely dissents from their conclusion as to the primary nature of the sympathetic affection, and points out that similar changes have been found in the ganglia in diffuse eczema, pseudo-hypertrophic muscular paralysis, pernicious anæmia, glio-sarcoma of the brain, general paralysis of the insane, cholera, and diabetes. He points out in conclusion that Giovanni (*Patologia di Simpatica*, Milan, 1876) "found cellular infiltration of the sympathetic ganglia in an immense variety of visceral and general diseases, showing that structural changes in the organs are very generally accompanied by signs of irritation in the ganglia."

It is not necessary, however, that there should be a destructive lesion of the solar plexus and semilunar ganglia in order to produce vaso-motor paralysis of the abdominal vessels. Irritation of a sensory nerve produces vaso-motor paralysis in the irritated region, and the well-known experiments of Goltz (*Klopfversuch*) have shown that irritation of the intestines produces complete vaso-motor paralysis of their blood-vessels, causing thereby so great an accumulation of blood that the animal shows symptoms of syncope, the same as if it had been bled copiously. In Addison's disease, from the beginning of the morbid deposit in the medullary substance of the supra-renal capsule, an irritation is transmitted to the semilunar ganglia and solar plexus, by which means a vaso-motor paralysis of the abdominal vessels is produced, as in the experiments of Goltz. This constant hyperæmia leads to enlargement of the glands of Brunner, the solitary glands, and Peyer's patches, so constantly met with, and, when more intense, to catarrh and ulceration of the intestinal mucous membrane. It also accounts for the dark color of the liver, spleen, kidneys, and pancreas so often observed, as well as for the brown color of the peritoneum sometimes noted, notably in a case of Severini. Indirectly it explains the anæmic and dry condition of other parts of the body, and fully accounts for the symptoms of muscular weakness, syncope, and gastro-intestinal disturbance.

In the case under discussion no mention is made of the size of the heart, which is noted as being small in numerous autopsies and the seat of fatty degeneration in several. On account of the abdominal hyperæmia, the quantity of blood reaching the heart at each diastole is less than under normal circumstances, and thus the invariable weakness, smallness, and softness of the pulse are explained. The heart is never normally distended, and thus its cavity becomes permanently diminished. On account of these heart-changes the abnormal distribution of the blood due to the abdominal hyperæmia is still further facilitated. Anæmia of the central nervous organs explains the dizziness, tendency to somnolence, lassitude, and lowness of spirits so often observed; also attacks of prolonged prostration and loss of consciousness, with convulsions; sometimes a condition of collapse that has been compared by Wilks to that of cholera. All the nervous symptoms of Addison's disease are not, however, to be explained by the theory of cerebral anæmia: such, for example, as restlessness, sleeplessness, psychical disturbances, clonic spasms in various muscle-groups, and sensory and motor paralyses. In such cases there is probably irritation of a cerebro-spinal vaso-motor centre, causing local hyperæmias of the central nervous organs. There are two paths by which such a reflex action may travel: 1, through the cœliac axis and its connection with the medulla spinalis; 2, through the branches of the phrenic and pneumogastric distributed to the supra-renal capsules; and

the degree of this irritability probably varies in each individual.

In connection with the abnormal deposit in the skin in Addison's disease, certain observations of Thudichum are of great interest. For sixty-five consecutive days he examined the urine of a patient of Dr. Burdon Sanderson. Without complicating fever or diarrhœa, there was a great diminution in the daily amount of urine excreted: the sp. gr. was 1020 and upwards, and the reaction acid. The observations were chiefly directed towards the determination of the percentage of uromelanin, omicholin, and uropittin, three products of decomposition of urine-pigment, of which the first is the most important. It has almost the same chemical composition as the melanin of the choroid and of the melanotic tumors, and, like the pigment in the skin, is iron-free. Thudichum found these pigments greatly reduced in amount, the uromelanin never rising above one-twelfth the normal. The speaker has been unable to find any record of a spectroscopic examination of the pigment deposited in the skin in Addison's disease, and would suggest the importance of such examination being made. There is an iron-free product of decomposition of hæmoglobin, namely, hæmatoporphyrin, which is iron-free hæmatin, the absorption-bands of which are figured in Hermann's "Handbuch der Physiologie," Band IV., Theil I. It would be interesting to compare the absorption-bands of these two iron-free pigments, both of which have their origin in the coloring-matter of the blood. It is evident that the diminution in the amount of urine-pigment may be in relation to the excess of pigment in the skin. The observations of Thudichum await further confirmation.

REPORT OF A CASE OF FOREIGN BODY IN THE PHARYNX: DEATH RESULTING FROM FAILURE TO RECOGNIZE ITS PRESENCE AND TO REMOVE IT IN TIME. BY WALTER F. ATLEE, M.D.

It is not at all an uncommon occurrence to have a visit from a patient who complains of having swallowed something that is still sticking in the throat. In almost every one of these cases there is no foreign body in the passage. Those patients have a local pain, in some cases the result of injury by a hard body hurriedly swallowed, and they are so entirely convinced by this sensation that a foreign body has lodged there that it is impossible to make them believe otherwise. The surgeon himself may make a mistake, and think he feels a something that ought not to be there. I heard even Nélaton say that in a certain case, after pushing his finger deeply into the pharynx and feeling a small resisting body, he made several attempts to seize it with the forceps before discovering it to be the great horn of the hyoid bone.*

* See Clinical Lectures on Surgery, by M. Nélaton, p. 54.

*

I made observations somewhat similar to these to a man who came, in great excitement, on the evening of the 30th of last December, to take me to consult with a well-known and experienced physician in the northern part of the city in the case of a child in a dying condition from the presence in the throat of a pin, as the father protested, but which the doctor had not found and did not believe to be there. On the afternoon of Christmas-day, five days before, the father said his child, just seventeen months old, most certainly had a pin in her mouth, that it had disappeared when he went to take it out, and the symptoms of throat-trouble began at that time. For five days the child had taken food with great difficulty and reluctance, keeping the hands in the mouth as if striving to pull something from the throat.

It will here be called to mind that while more bulky objects generally become arrested at the junction of the pharynx with the œsophagus, where the tube is narrowest and least easily expansible, a thin and pointed body, such as a pin, generally sticks between one of the pillars of the fauces and the tonsil, or thereabouts. Again, when such a body stops in the pharynx, that which takes place is owing less to its size than to its shape: it is a body that, as a rule, cannot be pushed farther instead of being extracted, as is often done with bodies of another kind. *It must always be extracted.*

On reaching the house, the child was found lying in a cradle, on her left side, the head thrown back, in a state of stupor, from which she could be roused but very imperfectly. She had had during the day several convulsions. The lips were bluish, and the whole countenance extremely pale, with a bluish tinge. There was a swelling in the neck on the right side, which was the uppermost, below the mastoid process, posterior to the line of the ear. This swelling was not so hard as in cases of diphtheria: it had the feel of cellular tissue affected by acute œdema and not by phlegmonous inflammation. In the mouth was some ropy mucus tinged with blood, but there was no repulsive odor. While examining these appearance it was suggested that the child had the mumps. There was no swelling, however, about the temporo-maxillary articulation, nor anywhere anterior to the ear. It was posterior to the ear and inferior to the mastoid process. Moving the head, the left side of the neck presented a condition similar to that on the right, though not so marked.

The attending physician said his treatment had consisted mainly in the administration of the chlorate of potassa in a syrupy solution. He did not believe in there being any foreign body in the child's throat, but was very willing to have search again made for it. When searching for it himself, he had made use of his eyesight only, and had never passed his fingers into the pharynx.

The child was taken up and held in the nurse's lap in a convenient position for the examination of the pharynx. The doing of this roused her somewhat, so that a few drops of chloroform were used to quiet her. The mouth was then opened, and the jaws kept apart by a large cork. When the finger was passed into the throat a pin was encountered, firmly fixed there, and seemingly stuck, one end between the right tonsil and the pillars of the fauces and the other in the posterior wall of the pharynx. The extremity of the forefinger of the left hand being kept in contact with the pin as a guide, a dressing forceps was made use of; and on the second attempt to seize it, and with the use of some force and some manœuvring to dislodge it, the pin was withdrawn. The pin was exactly an inch and three-sixteenths in length, and it was bent in the centre at an angle of about a hundred and twenty degrees. This bending could scarcely have been produced by the force used in extracting it from the throat.

As there was, of course, great difficulty, even impossibility, in making the movements of deglutition, and every attempt to swallow must excite reflex movements in the pharynx and retard cure, it was advised that no food or medicine should be given by the mouth. In order to try to nourish and stimulate the patient, appropriate enemata were ordered. The child, however, never revived, the stupor became more and more profound, and she died the following day,—just twenty-four hours after the removal of the pin. The cause of the trouble, the source of the irritation, having been gotten rid of, hopes were entertained that the patient might recover; but, as is often the case in children when the exhaustion and the enfeeblement of the nerve-centres have been so great that repeated convulsions are the result, she never again became conscious, and life gradually went out.

The history of this case teaches nothing new, but it is well at times to be reminded of what may occur, and of the extreme care and watchfulness that are at all times demanded in the practice of our profession, in order to avoid sad and even fatal mistakes.

Nearly a century and a half ago, it was in 1743, Hevin wrote, in the first volume of the *Mémoires de l'Académie royale de Chirurgie*, his *Précis d'observations sur les corps étrangers arrêtés dans l'œsophage*. In this paper, a hundred and sixty pages in length, by the recital of the facts themselves, by a long series of all the cases that had been until then recorded in ancient and modern times, are set forth the diversity of effects produced in the pharyngo-œsophagean canal by not only bodies of different kinds, but also by those of the same shape and nature, the different success of the means employed, the dangers more or less urgent to which the patients are subjected by the presence of these foreign bodies, and the consequences to be dreaded when they fall into the stomach.

About fifty years ago, Mondière, in the *Archives de Médecine*, wrote a number of "Memoirs,"* in which he says that although all the means for fulfilling the various indications that can be called for are all in this paper of Hevin, yet it does not set forth as precisely as should be the dangers that may result in cases of this kind from leaving too much to nature. His object in writing, he adds, will be successfully attained if he succeeds in warning young practitioners against a security to which they cannot always trust without regret, and he gives cases of spasm, convulsions, suffocation, inflammation, scirrhus, abscess, and saccular dilatation of the œsophagus, the result of failure to remove a foreign body arrested in the canal.

It is with this object—namely, that "of warning against a security that cannot be always trusted to without regret"—that I have ventured to take up the time of the College this evening with reading the history of the foregoing case. "*Bene facit qui ex aliorum erroribus sibi exemplum sumit.*"

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, FEBRUARY 5, 1885.

The President, B. F. BAER, M.D., in the chair.

CERVICAL PREGNANCY.

DR. E. E. MONTGOMERY read a paper in which he recounted the history of a case seen by him in consultation with Dr. Alexander. The patient had been pregnant eight times: the last labor had been terminated by forceps. The present pregnancy had lasted three months when she was taken with severe pain and quite profuse hemorrhage. An examination under ether disclosed that the cervix was distended, forming a globular tumor. The os, turned backward, was filled up with a tense membrane; breaking through it, the cervix was found to be a large cavity in which were the fœtus and its envelopes. The body of the uterus appeared like an excrescence upon the distended cervix: it would admit a finger, and was lined by a decidua. The membrane below was continuous with the outer mucous membrane of the cervix, so that the remains of it hung as a fringe from the os.

This case differed from the few cases of this condition described, in that there was no contraction of the os: in the majority of cases it occurs in primiparæ, and when discovered it is necessary to proceed to operative measures to make an opening.

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* For Mondière's "Memoirs" see the Archives Générales, vols. xxiv., xxv, xxvii., and xxx. of the first series, and vols. i., ii., and iii. of the second series.

Dr. GOODELL remarked that he had no knowledge of cervical pregnancy. One case which had been sent to him as such was epithelial cancer of the cervix. How could such a case be diagnosticated without a post-mortem examination? Dr. Montgomery's hypothesis of an arrested abortion was probably the correct solution of such a case as he had described. The fœtus might be forced out of the body of the uterus and arrested in the cervix by an unyielding os or by cicatricial bands. Some years ago, a physician of this city, of large obstetrical practice, had borrowed his écraseur for the removal of a supposed uterine polypus, which proved to be a fœtus in its amniotic sac. Dr. Goodell had never been able to understand how an experienced man could make such a mistake, but the description of this case of cervical pregnancy has thrown light upon the matter. Dr. Montgomery's description of the distended cervix would apply very well to uterine polypus with a long pedicle, and a mistake in diagnosis might easily be made.

Dr. MONTGOMERY questioned the primary occurrence of cervical pregnancy. He believed the fœtus had originally taken its seat in the body of the uterus, and was forced into its lower position later; but it might have been primary; the internal os being patulous, the same conditions that sometimes cause placenta prævia might cause the entire fecundated ovum to be arrested in the cervix.

RUPTURED UTERUS.

Dr. B. F. BAER presented the specimens and related the history (which will be found in full in the *American Journal of Obstetrics*). Mrs. F., colored, 32 years of age, married ten years, had borne four children at term and had one miscarriage. The first child was forceps-delivered and was still-born. November 14, 1884, she was taken in labor, a midwife being in attendance who pronounced everything correct. After a few hours of severe pains, the patient "felt something break in the womb," and labor ceased, but was replaced with sharp pains all over the abdomen; blood escaped in great quantity from the vagina. Collapse ensued, and she was thought to be dead. A slow reaction occurred, and her attendants waited for labor to begin again. Dr. Fisher was called to see her ten days after the accident. He found her abdomen tender and tympanitic; a mass like the head of a fœtus in the right hypochondriac region. The pelvis was empty. Temperature 103°; pulse 108, and small. Rupture of the uterus and escape of the fœtus into the abdominal cavity was diagnosticated. Dr. Baer was called in, and confirmed the diagnosis. The patient refused operative assistance, and preferred to die in peace, but five days later asked to be relieved. Preparations were made for laparotomy. An examination per vaginam revealed gangrenous pus escaping freely, and the placenta loose and hanging from the vagina; the hand passed readily through the os uteri and through a tear in the right wall of the cervix into the abdominal cavity, and came upon the trunk of the child. The latter was extracted through the vagina by version by the feet. It was putrid. The parts were well irrigated with carbolized water, and the hand, again introduced, entered an adventitious sac, and nowhere came in contact with intestines or other viscera. The uterus was well contracted, and quite small. The uterus and sac were washed out with carbolized water until it returned pure. The patient died of septicæmia ten days after the removal of the fœtus. Dr. Baer is in full accord with the principles advanced by Dr. R. P. Harris in his paper entitled, "If a Woman has Ruptured her Uterus during Labor, what should be done to save her Life?" (*Amer. Jour. Obst.*, October, 1880, p. 809), in which he advises that the abdomen should be opened and the peritoneal cavity thoroughly cleaned. In this case, however, nature had protected herself by forming an adventitious cavity, and there could be no reason to open the abdomen to clean this out, as it could be reached from below more directly and without injury to the soft parts.

Dr. HENRY M. FISHER: In Germany a distinction is made between lymphatic septicæmia and phlebitic septicæmia. In the first form the poison is absorbed by the lymphatics, and inflammation of serous surfaces with exudation is the consequence. In the phlebitic form numerous emboli are formed, and hectic fever and local pus-formations, the result of these emboli, are found. At the autopsy in this case, pleural and pericardial effusion was found. It will be remembered that peritonitis occurred very soon after the rupture.

Dr. GOODELL remarked that he had come intending to criticise Dr. Baer's treatment of this case for not resorting to laparotomy, but he found himself agreeing with both Dr. Harris and Dr. Baer. In recent cases laparotomy should always be performed, but in fifteen days an adventitious sac had been formed, and the danger to the patient would have been increased by operation. He had seen two cases of rupture of the uterus. Both of them occurred in the practice of a physician who never used obstetric forceps, and who had to send four miles for a consultant. In the first case peritonitis rapidly supervened, the abdomen became very much enlarged, and the fœtus could not be located by palpation. The abdomen was not opened. After long groping, the fœtus was found close under the diaphragm. He had great difficulty in extracting it, as the loops of intestines became entangled between its legs; the placenta was also found in the abdomen. In the other case the body of the fœtus had escaped

into the abdomen, but the head was still in the uterine cavity: it was delivered by forceps. Both patients died. In both cases it would have been far better to have opened the abdomen.*

Dr. HARRIS is in accord with Drs. Goodell and Baer as to the proper treatment of the case reported. It was too late to do anything when the physician was called. The general opinion is coming around to coincide with his way of thinking concerning the propriety of laparotomy in all cases as soon as reaction from the shock of rupture and hemorrhage has been established. Of the cases reported after such treatment, fifty per cent. have recovered. One woman has been reported as having ruptured the uterus in four successive labors with delivery per vaginam and without laparotomy, and survived it all; but such a case is phenomenal. Three cases in Europe have been treated by removal of the uterus, as in the Porro operation: they all died. There seemed to be no reason for such a method. In most cases the split extends through the cervix, and thus free drainage from the abdominal cavity is secured. One reason for closing the cervical rent by sutures is to avoid the danger of cancerous growths, to which that lesion is supposed to give rise.

Dr. LONGAKER remarked that many of these cases died from the profound shock and hemorrhage immediately following the accident. Two cases in his experience had died within two hours, one of them undelivered.

Dr. BAER was glad to hear Dr. Harris make the distinction as to the propriety of laparotomy in his case, where the patient was not seen until fifteen days after the accident and was suffering from septicæmia. He had intended to perform laparotomy, and was prepared for it, but when he found the newly-developed sac he changed his plan, as he thought nothing could be gained by it.

OVARIAN CYSTS.

Dr. BAER exhibited two ovarian cysts. Mrs. B., widow, entered his private hospital December 18, 1884. She commenced eight months before to suffer from frequent calls for micturition, with severe scalding pains,—symptoms apparently of cystitis and urethritis. The uterus and ovaries were in good position and seemed normal, but two weeks later there was a burning pain in both ovarian regions, with a perceptible bulging, largest on the right side. The menses had ceased, and the doctor in attendance suspected pregnancy, but exposure was denied at that time. The abdomen enlarged rapidly, and the patient finally acknowledged the possibility of pregnancy and thought she felt movements of the fœtus. At seven months uterine hemorrhages commenced, and continued every day; the mammæ were atrophied; there were no signs of the presence of a fœtus; there was some fluctuation; the sound was passed, and the uterus was found empty and not enlarged; the face was wasted and had an anxious expression, and the pulse was quick. A diagnosis of ovarian cyst was now made. A deep diagonal sulcus could be made out in the abdominal tumor, the largest portion being on the right side; the tumor was smooth-surfaced and without nodules. The cervix was soft, patulous, high up, and drawn to the left. When the tumor was moved the uterus moved with it, as shown by the handle of the sound. Immediate operation was advised and performed. Incision three and a quarter inches; two large tumors were revealed; both were tapped; the left, which was free from adhesions, was withdrawn without difficulty, its pedicle transfixed, ligatured, and dropped. The larger tumor, although free from abdominal adhesions, could not be drawn out, and it was found to be very tightly adherent to the uterus, which seemed to be one mass with it. As the fluid drawn from this tumor was clear, it is not improbable that it was a cyst of the broad ligament. It became necessary to enucleate the cyst, and a long, gaping wound was left in the broad ligament. This was transfixed and tied as a pedicle, but after the final division had been made the ligature slipped, and the hemorrhage was immense: ten hæmostatic forceps were applied temporarily, and the bleeding points were firmly secured. The wound of the broad ligament was closed by ten interrupted sutures. The operation lasted two and a half hours. The patient collapsed, and he feared she would die on the table, but she reacted, and recovery was uninterrupted. The patient sat up in two weeks. An incident which occurred on the fourth day shows the necessity of the proximity of a physician or thoughtful nurse. A scream from the patient; an announcement of a sudden pain on the right side; the patient said something seemed pulling inside of her. Dr. Baer was near, and was called. He feared internal hemorrhage, but at once inquired how long it had been since she had passed water. Four hours. The catheter was immediately used, and complete relief was secured. After this the catheter was not required until the tenth day, but from the tenth to the twentieth day there was entire inability to pass water except by assistance of the catheter. She went home on the twenty-third day.

The points of special interest in this case are:

1st. The patient being entirely well, symptoms of gonorrhœa presented themselves, and were followed by

2d. Amenorrhœa for seven months, followed by

3d. Daily hemorrhages for one and a half months.

4th. Ovaritis and large tumors forming in

* See Amer. Jour. Obst., vol x., 1877, p. 478.

eight and a half months from the initial symptoms.

Dr. BEATES. A young lady was obliged to separate from her husband one month after marriage, in consequence of domestic trouble. Her menses continued regular, but her abdomen enlarged as rapidly as if she were pregnant. Her health failed, and at the expiration of nine months an ovarian tumor was removed. Recovery was complete and rapid.

In another case he found numerous omental and enteric adhesions, which were easily separated, but pelvic adhesions required enucleation of the cyst, which left a large V-shaped wound in the broad ligament, as described by Dr. Baer. Hemorrhage was very free. In trying to dissect off the tumor from the fundus of the uterus, that organ was badly wounded. The cavity was opened, and required to be closed by sutures. Great tympany followed this operation, and breathing became almost impossible. The patient recovered.

CALCULI IN THE FEMALE.

Dr. J. W. SNOWDEN exhibited the stones, and related the history of the case. He was called, June 1, 1884, to see Mrs. L., aged 23 years. She was born and resided in a limestone region in New York.

Up to thirteen years of age she was troubled with anuresis, wetting the bed almost nightly. After this she ceased passing her urine during sleep, but was obliged to rise for this purpose two or three times during the night. She could not retain her urine, night or day, after the desire to pass it came on. If she could not reach a convenient place she would wet her clothes.

She married when seventeen years old. Two months after marriage she began to have cystic irritation, and soon passed sabulous matter and small calculi. These symptoms continuously increased. Physicians whom she consulted said she had catarrh of the bladder, but none made an examination for stone. Once she was obliged to call on a medical man to remove a calculus which had become impacted in the urethra.

Two years ago she spent a summer in New Jersey, during which time she passed no gravel, but the irritation of the bladder continued. When he first saw her she was urinating very frequently, with more or less pain. She passed stones daily, with a great deal of sabulous matter. The urine looked as if there was a quantity of ordinary sand in the bottom of the vessel. He proposed an examination for stone, which she refused peremptorily. He gave her benzoic acid, which entirely stopped the passage of the sabulous matter and relieved her in every way, but she still occasionally passed a small calculus. This marked relief lasted two or three months, when the irritation of the bladder became worse than ever. She could only pass her urine in the erect position, and with as much pain as a woman in labor. He again insisted upon an examination for stone, but the slightest touch excited such intense pain, even when she was well etherized, that, being alone, he could not manage her, and therefore sent for Dr. B. F. Baer in consultation.

A calculus measuring about one and a half inches in its largest diameter was found in the bladder, and removed by Dr. Baer after rapid dilatation of the urethra. This afforded marked relief, and she soon seemed entirely cured: but in a short time her urine began to dribble continually while she was in the recumbent position at night. During the day she retained and passed her urine naturally. He advised her to get up at stated intervals and empty her bladder, which had gradually relieved this trouble. She is now quite well, except that she urinates rather more frequently than is natural.

NEW YORK PATHOLOGICAL SOCIETY.

STATED MEETING, FEBRUARY 11, 1885.

The President, JOHN A. WYETH, M.D., in the chair.

A SPECIMEN of

CARCINOMA OF THE BREAST

was presented by Dr. WACKERHAGEN.

HYDROSALPINX.

Dr. CHAMBERS presented the right ovary and tube removed at the Woman's Hospital on the 17th of January. The patient had suffered from severe pain in the right side of the pelvis for eight years, and had had repeated attacks of localized peritonitis. The right ovary was found to contain a cyst about the size of a hen's egg, and was removed with the tube. The left ovary was very small, and so firmly adherent that the operator made no attempt to remove it. The patient made a very good recovery, and said she felt better than she had for many years.

THE COCCUS OF ACUTE LOBAR PNEUMONIA.

Dr. T. M. PRUDDEN presented specimens of the coccus of acute lobar pneumonia, described by Friedländer as being constantly present in that disease. Dr. Prudden had examined a large number of lungs the seat of acute lobar pneumonia, in all of which he found the coccus, and he had also found it in all specimens (ten in number) of bronchopneumonia in children which he had examined.

HYSTERECTOMY FOR UTERINE FIBROIDS.

Dr. H. MARION SIMS presented the uterus with eight fibroids, together with the ovaries and tubes, which he had removed from an unmarried woman, aged 31, suffering for a long time with frequent returns of the menstrual flow, which was excessive and preceded by pain across the abdomen. A tumor was

recognized, and, after palliative treatment for a year, laparotomy was performed. The patient was about the room five weeks after the operation.

EPITHELIOMA INVOLVING THE TIBIA AND THE OVERLYING SOFT TISSUES.

Dr. GEORGE F. SHRADY presented the leg of a man, 60 years of age, removed by the supra-condyloid amputation of the thigh for malignant disease. When the patient was about eighteen years old, a sore, probably caused by traumatism, developed over the shaft of the tibia, and had remained ever since. A year after the first appearance of the trouble he noticed a shell of bone at the bottom of the wound, which afterwards exfoliated. He got along with what seemed to be a simple ulcer until about two years ago, when pain obliged him to use crutches. About a year ago the ulcer took on a new form of action, spreading in different directions, and began to involve the tibia. The discharge became thin and sanious, and frequent and severe hemorrhages occurred. About seven months ago the patient noticed a false point of motion, and it was evident that the tibia was breaking down. Dr. Shrady saw him about a week ago, when it was plain that there was malignant disease of some nature, supposed probably to be scirrhus originating in the medulla of the bone.

Circumstances not permitting of a microscopical examination before the operation, a positive diagnosis was not then made. The ulcer itself presented very much the appearances of an epithelioma. Since the operation, microscopical examination by Dr. W. H. Porter proved that it was unquestionably epithelioma, which had apparently progressed from the skin and finally invaded the medullary cavity of the bone. It seemed to have been a case in which the disease began as an ordinary periostitis, increased, became a limited caries, osteo-myelitis, and finally, by continued irritation for forty years, the ulcer took on a malignant tendency and epithelioma developed. The upper portion of the tibia and condyles of the femur seemed to be entirely free from the disease, as was also the foot. He had never before seen a case in which epithelioma developed in the skin and progressed until it secondarily involved the bones of the leg. He thought that if an operation had been done some years ago, epithelioma would not have developed.

Dr. PORTER said Billroth spoke of epithelioma beginning in the integument and extending to the bone, cutting it in two.

Dr. RIPLEY doubted the last statement made by Dr. Shrady. Many men had a sore forty years and did not get epithelioma; many men had epithelioma not having had sores forty years; and it was possible for a man to have epithelioma forty years.

Dr. SHRADY replied that he agreed with Dr. Ripley entirely, but said it was quite possible, but hardly probable, that his doubt would be supported in practice. The clinical history of the case seemed to show very plainly that until comparatively recently there had been a benign sore, which had become malignant. This fact pointed out the danger to patients of allowing long-continued irritation to exist without submitting to an operation.

The PRESIDENT thought malignant disease often resulted from irritation, whether or not there were an hereditary tendency.

Dr. W. M. CARPENTER remembered to have heard Volkmann, of Halle, direct special attention to the liability of long-continued cutaneous irritation to give rise to malignant disease.

Dr. PORTER said that when he and Dr. Satterthwaite were preparing their report upon cancer, the conclusion to which they came was that in the majority of cases its origin was in long-continued irritation of some kind.

CARDIAC DISEASE: ERYSIPELAS FOLLOWING CUTANEOUS PUNCTURE FOR ANASARCA.

Dr. J. H. RIPLEY presented the heart removed from the body of a man, 27 years old, the patient having died in the St. Francis Hospital, February 6, 1885. He had been in the Hospital in June, 1884, with acute Bright's disease and mitral insufficiency. He was discharged improved, but returned in January, complaining of pain over the heart and swollen feet at night. There was general anasarca, hydrothorax, and cough. There were four cardiac murmurs: 1. Systolic, heard with greatest distinctness at the apex, conveyed posteriorly, loud and blowing in character. 2. Systolic, heard with greatest intensity at the base, transmitted up into the large vessel. 3. Diastolic, heard with greatest intensity at the xiphoid cartilage, circumscribed. 4. A slight superficial friction-sound at the junction of the second rib with the sternum on the left side.

The abdomen contained a large amount of fluid; there was dyspnœa and loss of appetite; the pulse irregular and feeble. Several punctures were made about the malleoli, inner aspect of the thighs, and scrotum; also on the left hand, which was much more œdematous than the right. A large amount of fluid dribbled away through the punctures, and the symptoms improved greatly. About a week after the punctures in the back of the left hand had healed, erysipelas developed in the extremity, and was one of the factors in causing death.

The points of interest in the case were, first, the development of erysipelas after puncture for œdema. While in this case the inflammation could not have been excited by the punctures, which had healed, in another case which had come under his observation

since Dr. Carpenter brought the question before the Society two or three years ago, the erysipelatous inflammation was evidently due to the punctures. These were the only two cases coming under his observation in which punctures for œdema had been followed by erysipelas. But it should not be forgotten that erysipelas was liable to develop in some cases whether or not puncture was made, and that the relief which the draining away of the fluid gave more than compensated for any slight increased risk of the development of cutaneous inflammation.

Second. At the autopsy the pericardium was found adherent to the heart throughout the entire extent, except near the base, and it was there that a slight friction-sound was heard. He had noticed in several cases of chronic pericarditis œdema of the left arm particularly.

Third. The heart was found to be immensely hypertrophied and greatly dilated; the mitral valve was the seat of stenosis, thickening, and insufficiency, and this led him to say, with regard to the so-called presystolic murmur occurring with stenosis of the mitral valve, that he thought it a very rare occurrence. He had examined this patient repeatedly and with great care, but no presystolic murmur was to be heard.

Fourth. Dr. Loomis stated that when there was adhesion of the pericardium to the walls of the heart and to the chest-walls, the apex-beat would be found above its normal position and not displaced to the left. In this case the apex-beat was displaced downward and to the left, showing that no general rule on this subject could be made.

Dr. Van Santvoord thought Dr. Ripley's statement that a presystolic murmur was infrequent in mitral stenosis should not pass without comment. It was true that this murmur disappeared most readily during quietude, but to say that it was infrequent was too strong a statement. The murmur often existed as a prolongation of the first sound, and not as a distinct blowing sound, but on excitement it was readily recognized as a murmur. With regard to œdema of the left arm in chronic pericarditis, a few months ago he related a case in which there had been œdema of the right arm without local cause.

Dr. Porter had made post-mortem examination in two cases in which mitral stenosis was diagnosed during life from the so-called presystolic murmur, and the diagnosis was confirmed. He thought there could be no question but that there was a murmur produced by obstruction to the flow of the blood from the auricle into the ventricle.

Dr. Ripley did not say that the murmur never occurred, but his own experience and that of Dr. Leaming and others was that it occurred rarely. The diagnosis of mitral stenosis was sometimes made, based upon the existence of a presystolic murmur, but could not be confirmed at autopsy.

Dr. Carpenter had raised the question with regard to erysipelas occurring after puncture for œdema because an aged country physician, who had general anasarca due to cardiac trouble, desired to have the punctures made notwithstanding the liability to the development of erysipelas, and, the operation being performed, erysipelas developed, became phlegmonous, and ended fatally. Since then he had asked a number of surgeons their experience in this direction, and they always answered that they had not had erysipelas follow cutaneous puncture for œdema.

DIPHTHERITIC CAST OF THE TRACHEA AND BRONCHIAL TUBE.

Dr. Ripley presented a large piece of diphtheritic membrane, constituting nearly a complete cast of the lower portion of the trachea and one bifurcation of the bronchial tube, which he had extracted through a tracheotomy-wound. The operation was followed by relief from dyspnœa, and the child was then convalescing. Tracheotomy had been performed about the third day after the commencement of the disease.

TUBERCULOSIS OF THE LARYNX IN A CHILD TWO AND A HALF YEARS OLD.

Dr. Van Santvoord presented specimens of apparent tuberculosis of a metacarpal bone and phalanx of one hand, and of the larynx, removed from the body of a child two years and seven months old. It was believed that syphilis could be excluded. Tuberculosis of the larynx in so young a subject was a very rare affection. The specimens were referred to the Microscopical Committee.

DESTRUCTION OF ONE LUNG IN A CHILD FOUR AND A HALF YEARS OF AGE.

Dr. S. J. McNutt presented specimens from the body of a child whose clinical history she could not give, illustrating complete destruction of the left lung, extensive degeneration of the right lung, and general tuberculosis throughout the body.

Dr. Carpenter had recently made an autopsy on the body of a man in which there was almost complete destruction of one lung, with emphysema of the other.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 5, 1885, A. Jacobi, M.D., President, in the chair.

Drs. A. C. Post and John T. Metcalfe were unanimously elected Honorary Fellows.

THE ETIOLOGY AND TREATMENT OF NASAL CATARRH, WITH SPECIAL REFERENCE TO THE DEVIATED SEPTUM.

Dr. William C. Jarvis read a paper with this title. The deviated septum might be

either osseous, cartilaginous, osteo-cartilaginous, or hypertrophic. Osseous deflection rarely occurred alone, being almost invariably associated with the cartilaginous form. The author then discussed the evil effects of pressure-irritation of the deviated septum upon the turbinated tissues opposite, and of defective drainage, as causes of nasal catarrh. He described the form of the floor of the nostrils at the back part, and of the arytenoid cartilages, which is specially adapted to direct the nasal secretion away from the larynx into the pharynx, where it was innoxious. To the deflected septum and turbinated hypertrophy he attributed nearly all the troubles arising from defective nasal drainage.

The causes of deviation of the septum are heredity, traumatism, and acquired conditions. One principal indirect cause of chronic nasal catarrh is a peculiar formation of the hard palate by which the nasal septum is forced to deviate from a straight line, and this malformation of the palatine arch is often transmitted from parent to children. One could diagnosticate chronic nasal catarrh by the form of the roof of the mouth. He emphatically rejected the prevalent idea of a diathesis or specific constitutional taint as the determining factor of nasal catarrh. There is another means of explaining the existence of nasal discharge which is so frequently found in intellectual men and women, without casting upon them such an odium. The encroachment of the cranial vault, in intellectual people, upon the bones of the face causes a deviation of the nasal septum, and thus leads to chronic nasal catarrh. The traumatic deviation of the septum is frequently seen in pugilists and persons of lower social life.

The treatment consists in a correction of the deviation of the septum, and this could be effected by certain instruments, a variety of which Dr. Jarvis exhibited. In order to reduce the sensibility of the parts before operating, he made use of a ten-per-cent. solution of cocaine, or, in extreme cases, of rhigolene. The latter anæsthetic easily exploded, and this could be guarded against by the use of the electric light.

Dr. F. H. Bosworth opened the discussion, and said that he and Dr. Jarvis had worked together for so many years that he did not expect to be called upon so soon to criticise him. Dr. Bosworth would drop the word nasal catarrh, as it simply signified discharge, which might be present in any form of nasal disease. He thought that the diagnosis of nasal affections had been rendered easy by the anæsthetic properties of cocaine. Dr. Jarvis laid stress upon pressure-irritation as an etiological factor in these troubles; this point had also been brought forward in the January number of *The American Journal of the Medical Sciences*, 1876, by Dr. Harrison Allen, at which time it gave rise to a great deal of comment. If two mucous surfaces in contact with each other in the nasal cavity give rise to irritation, the nasal cavity differs from other mucous cavities throughout the body. Dr. Bosworth did not believe the question of pressure-contact entered as an etiological factor at all. The pressure was an adventitious circumstance, depending upon hypertrophy of the mucous membrane, and gave rise to no symptoms at all. Nor did he believe that the nasal secretion was harmful, and consequently the question of nasal drainage did not come in as an etiological factor.

Deviated septum more than all other conditions combined acted as an etiological factor in nasal troubles, but it was not because it gave rise to pressure or defective drainage, but because it interfered with the normal function of the nose as a breathing-organ. The air, having to pass through the narrowed passage, became rarefied, and the venous sinuses became engorged with blood. The lecturer had expressed his disbelief in diathesis as an exciting factor of nasal troubles. But, unfortunately, he referred to a condition in illustration of his view which was pretty well recognized as being strumous,—namely, mollities ossium. He had seen the peculiar form of the palatine arch with deflection of the nasal septum, such as was referred to by Dr. Jarvis, in two cases.

As to treatment, the indications were clear,—namely, to remove the obstruction within the nasal passage; and this could be done with any instrument which the surgeon found to be most useful in his hands. As to cocaine as an anæsthetic, he had found a two-per-cent. solution sufficiently strong and costly.

Dr. S. O. Vanderpoel, Jr., had practised a method recommended by Dr. Roberts, of Philadelphia, for correcting a deviation of the nasal septum in five cases, the result in two cases being quite satisfactory, and in the others also more or less satisfactory. The operation consisted in retaining the deviated septum in its corrected position by means of a pin. The pin, being small, scarcely acted as a foreign body, and constituted no deformity while being worn.

Dr. D. B. Delavan said that one would be astonished, on examining a number of skulls, to find how many possessed a deviation of the nasal septum. But it was also true that the nostril on the concave side of the septum might be less patent than the other, due to an enlargement of the middle turbinated bone on that side. Therefore, removal of the mucous membrane and underlying tissues on the convex side of the septum did not always relieve the patient of his trouble, because it did not touch the abnormal condition on the opposite side. He thought, therefore, that the enlargement of the middle turbinated bone on the concave side of the septum should first receive treatment, and, if the patient were not

then relieved, the deviation of the septum might be corrected.

Dr. A. C. Post remarked that in stenosis from deviation of the septum, where it was necessary to remove a portion, the operation could be facilitated by transverse division of the columnæ and afterwards securing them in their replaced position by sutures.

Dr. Jarvis had used the word catarrh as the one most commonly employed. He had distinctly stated that the normal mucous secretion of the nose was harmless; but when, in diseased states, it became thick, it certainly possessed irritating and harmful properties. He agreed with Dr. Delavan that the malformation mentioned by him might exist, but it occurred only seldom. With regard to the use of pins, he could not get his patients to submit to that mode of treatment.

RECURRENT FIBROMA OF THE BREAST AT SEVEN AND ELEVEN YEARS OF AGE.

Dr. George G. Hopkins, of Brooklyn, presented (under the microscope) a section of a fibroma of the breast which was first extirpated by a physician in the West when the little girl was seven years of age. The tumor, recurring, was, together with enlarged axillary glands, excised by Dr. Hopkins when the child was eleven years of age.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A STATED meeting was held February 23, 1885, Daniel Lewis, M.D., President, in the chair.

CHOLERA: ITS MODE OF INTRODUCTION; ITS PREVENTION AND TREATMENT.

Dr. Peters traced the origin of the different epidemics of cholera in this country to three different points,—namely, Quebec, New York, and New Orleans. Here he took occasion to allude to the theory that the germs of the disease were carried by the wind, and said that if this were the way in which cholera was introduced, points near the coast which vessels passed would have been infected before the cities mentioned. It was very difficult to find out the first case of cholera, inasmuch as the first death was likely to be of a resident who may have had no knowledge of exposure to the contagion in an immigrant or imported articles. Besides, several local points were liable to be infected about the same time by the sick visiting different privies. The disease, when introduced at Quebec, spread up the lakes, reached the Mississippi River, and went down to New Orleans. At nearly the same time that Quebec had its first cases there were also cases of cholera in New York. In 1848 the contagion was introduced simultaneously at New York and New Orleans. From New Orleans it was carried up the Mississippi, emigrants conveyed it among the Indians and to California, and it also reached San Francisco by vessels from New York. In 1854 the cholera broke out in New Orleans, and reached Niagara Falls before New York city saw the disease. In the spring of 1865 cholera started at Bombay, was carried by way of the Red Sea to Mecca by pilgrims, was brought by steamships to Marseilles, and finally reached New York in November. The cholera of 1873 entered New Orleans in what manner was unknown. While the citizens of Memphis were in ignorance of its existence in New Orleans, the cholera appeared in their city, and from there was carried to Nashville, where the greatest number of deaths took place. In that year Dr. Peters visited Cincinnati, to learn, if possible, the origin of cholera there, and he showed the difficulties to be overcome in such investigations. A hospital which was supposed to have had the first cases refused an examination of its books, and would only give the information that some cases of cholera had been in the wards, but all were then convalescing. Within about a week the matron, the senior physician, and his assistant all died of the disease. A stream of clear water came from the foot of the hill on which the hospital was situated, and was used by the people in the vicinity: it was not improbable that it contained the germs of cholera.

Bombay had had more or less of cholera since 1848, but after an improvement in the sanitary condition of the city the annual death-rate markedly decreased. Regarding the appearance of cholera in France in 1884, it was his opinion that it was carried from India by way of the Red Sea and the Suez Canal to Damietta, spread over Egypt, and finally reached Marseilles or Toulon. As was usually the case, in Damietta they placed a strong cordon of soldiers around the city to keep the cholera in, after thousands had fled and conveyed the cholera elsewhere. The rise of the Nile, he thought, was the chief means by which the contagion was driven out of Egypt. The speaker described the dirty condition and ill sewerage which existed in Toulon, and readily accounted for the spread of the cholera to Italy by the fleeing Italian workmen. It was a noteworthy fact that the cholera affected only such portions of Italy as were not malarious, a strong piece of evidence against the malarial origin of the disease, a theory to which some in this country, particularly in the South and West, still adhere. It was also a noteworthy fact that Lyons, France, had never had a severe visitation of the cholera. This was due, the speaker thought, to the excellent drainage and cleanliness effected through the rapid rivers Rhone and Saône. The efficiency of a well-enforced quarantine was seen in Denmark, which country had ever escaped the cholera by which its neighbors were afflicted

until on a given occasion when the quarantine was not enforced and the contagion was introduced into her borders. Greece had also escaped through means of an efficient quarantine until the Crimean war, when the quarantine was forced by the French and English soldiers.

Dr. Peters thought that cholera was always conveyed by caravans, clothing, ships, persons, and that the manner of its introduction into the human body was through the mouth. It was important to wash the hands frequently, and always to use clean water and a clean towel, during epidemics of cholera. The theories which had been advanced that cholera owes its origin to earthquakes or volcanoes, to ocean-currents, to the eating of watermelons, etc., need scarcely be mentioned. He did not think that summer diarrhœa had any connection with cholera; but when an endemic prevailed it would be well to treat all cases of diarrhœa as if of choleraic origin.

With regard to the treatment, he referred to an article on this subject which he published in a recent number of *The Medical Record*. It had been shown that a large number of the so-called cholera remedies were incapable of destroying the germs which were found in the dejections of a patient suffering from cholera except in very large quantities. Among the exceptions to this general rule was tannic acid; and it was Dr. Peters's opinion that the chief means for the relief of cholera was an acid.

RECENT RESEARCHES IN CHOLERA.

Dr. Edmund C. Wendt read a paper with this title, in which he gave a lengthy review of the theories which had been advanced by different authors of the origin of cholera, and especially of the germ theory, which had received so much attention since the discovery by Koch of the comma-bacillus. It was the author's opinion that, although the question was not positively settled, the ground which had been taken by Koch was pretty firmly established.

ARTESIAN WELLS AS A SOURCE OF POTABLE WATER.

Dr. Cyrus Edson, of the Committee on Hygiene, made a report on this subject. He quoted cases illustrative of the fact that in different cities contagious diseases, as cholera, had been spread by the inhabitants drinking of water from wells contaminated by the sewerage, and remarked that the wells furnished a sort of endless circulation,—well, man, privy, well. In Paris and some other cities the artesian wells gave water which was the drainage of the clean surface at a distance from the city, and it also passed through a chalk formation, which acted as a disinfectant. In New York the geological formation was such that the wells contained such water as drained from the surface above, and consequently contained the substances found in the sewers and the dirt of the streets, and would be an efficient means for the spread of cholera should the disease be introduced into the city. The Health Board had, therefore, interdicted the use of the water from the wells of the city except for manufacturing and chemical purposes. The breweries had not been interdicted its use in the manufacture of beer, because the water was subjected to a high degree of temperature in the process of manufacture, thus destroying all organic life. The water of the artesian well, being hard, was better for the brewing-business than was the water from the aqueduct.

GLEANINGS FROM EXCHANGES.

Cholera Commissions and their Lessons.—In commenting upon the preliminary report of Drs. Klein and Gibbs, and Koch's publications upon the etiology of cholera, the *Indian Medical Gazette* says, editorially, "The lessons to be derived from these two Cholera Commissions, with their widely-divergent conclusions in dealing with the same subject, are very numerous and important, and ought to serve as a lasting caution against the premature formation and ready acceptance of speculative conclusions, based on uncertain and insufficient data. There is one important matter in this connection which cannot be too strongly condemned; that is, the reckless employment of argument by analogy in scientific investigations. From such an improper use of analogy nothing but discomfiture can be hoped for. Even when the intervening facts are correct, the process of arguing by analogy which Dr. Koch now takes to in every case is utterly inadmissible in scientific matters as equivalent to proof: it can only legitimately be used as affording a lead to experimental work in quest of proof. The process is a very double-edged one, and may be employed with curious results for the germists. The absolute folly that such a line of argument may lead to could not have been better illustrated than in the case of the comma-bacillus, where three negatives are assumed to be equal to one positive,—*i.e.*, typhoid fever cannot be experimentally shown to be due to a bacterial origin; leprosy is in the same condition; but because we have chosen to assume that the two former diseases are due to such an origin, we have in this assumption the proof that cholera is so also."

Oxygen Treatment of Phthisis.—Dr. Albrecht, of Neuchâtel, has submitted many of his patients in the Children's Hospital at Bern to the inhalation of oxygen, with a view to ascertaining its effects upon the development of phthisis, and whether by increasing

the rate of organic combustion by this means the bacterium of consumption would not be destroyed and eliminated from the system. The subjects were tuberculous patients in whose expectorations the bacterium of phthisis had been discovered with certainty on several occasions. The patients were first submitted to an appropriate highly-nutritious diet, consisting of milk and peptone, and twice a week they were weighed with great care. It was observed that as soon as the oxygen inhalations began, the daily loss of weight was checked, and in some cases the weight increased, dyspnœa diminished, and the number of bacteria seen under the microscope appeared smaller.—*New York Tribune.*

THERMONEUROSES.—In an article by Longuet, dealing with many of the phenomena of this subject, he makes the statement, at which few will cavil, that the nervous system exerts a direct influence on heat-production, not only in causing the highest degrees of temperature, but in giving the very low thermometric readings of collapse as well. He vigorously protests against the false interpretation which makes the term "hyperthermy" synonymous with the febrile condition. He attributes the various phenomena to the vasomotor action, but does not venture to advance any theory as to the mode of operation, contenting himself with the remark that the clinician has to wait until the physiologist throws some light upon his path.—*L'Union Médicale*, 4th and 6th January, 1885; *Edinburgh Medical Journal.*

BARBASCO.—Dr. L. Emmelheinz writes from Las Vegas to the *Medical World* in praise of barbasco, an indigenous plant of New Mexico and Arizona, which he recommends as a substitute for quinine, and also states that in small doses it is an excellent laxative, and in larger ones a drastic cathartic, producing much griping. The pulse and temperature fall under its influence, but it produces no head-symptoms like quinine. Although it has proved useful in intermittent and remittent fevers, the action is so different from quinine that it is hardly probable that it ever will effectually supersede it, although it is much cheaper. The fluid extract is made from the recent herbs; the dose of which is from ten to twenty drops in a teaspoonful of water every two to six hours.

From the statement of the writer that the plant is a "species of Croton," it is inferred that it is allied to the Croton Eluteria (Bennett) of the Bahamas, which was formerly employed in the treatment of intermittents, but has lost its reputation as an antiperiodic. The variety commonly known as Copalchi bark (Croton Pseudo-China of Schiede) "is an aromatic tonic employed in Mexico in intermittents, and capable of useful application in all cases requiring a mild aromatic bitter."—*United States Dispensatory*, 1883, page 366, foot-note.

MISCELLANY.

REFORM IN MANAGEMENT OF A HOSPITAL FOR THE INSANE.—The managers of the Morristown Insane Asylum of New Jersey have decided upon making a change which will probably exercise an important influence upon the treatment of the insane in this institution. The business management of the hospital is to be placed in the hands of a warden, so that the medical director and his four assistants can devote their entire attention to the care of the patients. Feeling that this innovation has attracted general attention, and knowing how much is involved in it, the medical officers, we are confident, will use every effort to make the experiment successful.

THE WAGNER HYGIENE ASSOCIATION has published a prospectus of a "Philadelphia Sanitary Protective League." The proposed organization is to be a voluntary one formed by citizens with a view to placing the city of Philadelphia in better condition to pass through a cholera siege. It will render such aid as lies in its power to sustaining and stimulating the health authorities in their work, by improving the sanitary condition of private houses, looking after the health of employees, and by a system of public lectures on hygiene. Branch committees will be formed all over the city. The main office is at 2246 Ridge Avenue, where C. C. Vanderbeck, M.D., the Secretary, can be addressed for further information.

THE Minister of Public Worship in Germany has lately assured himself that vivisection is advantageous to science, and he has issued regulations regarding the conditions under which it may be practised.

1. Experiments upon living animals can only be carried out for the objects of scientific investigation or instruction. 2. In public lectures these experiments can only take place when they have special reference to the subject that is under study. 3. The preparation for the experiments must be made before the lecture, and not before the public. 4. The experiments must be made by the professors or their assistants under the personal responsibility of the professors. 5. All experiments tending to the same results in the lesser animal species as on the higher must be made on the former. 6. All animals must, when possible, be subjected to anæsthesia during the experiments.

WOMAN'S MEDICAL COLLEGE.—The thirty-third annual commencement of the Woman's Medical College of Philadelphia was held at the Academy of Music on the 11th instant, graduating a class of twenty-two. W. W. Keen, M.D., delivered the address, and T. Morris Perot, Esq., President of the Board of Corporators, conferred the degrees.

THE MARINE HOSPITAL SERVICE.—It has been stated by a Washington paper that the veteran sanitarian Dr. A. N. Bell is a candidate for the position of Supervising Surgeon-General of the Marine Hospital Service. This would be an appointment which we feel sure would receive the hearty sanction of those who are most active in their efforts in behalf of public health, both in and out of the ranks of the profession.

NOTES AND QUERIES.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

DEAR SIR,—I read with much interest the case reported in your number for March 7, by Dr. Henry M. Wetherill, Jr., of *Morbus Maculosus Werlhoffii*. I would like to repeat with him that "I should be exceedingly glad to learn more of this singular affection, and would be obliged to any of my professional brethren for further enlightenment upon this subject."

In a well-marked case under my care last summer I was entirely persuaded that the affection was the result of nervous exhaustion. The patient was a gentleman in the prime of life and in high position, who had been overworked and worried and kept in a state of anxious suspense for several weeks.

Ziemssen (vol. xvii p. 269) tells us that the theory of a neurotic disease of the blood-vessels is perhaps more tenable than any other in explaining those very rare cases of acquired and transitory hemorrhagic diathesis. This theory was suggested by some recent experiments performed by Nothnagel on animals, which prove that multiple hemorrhages occur in the lungs after slight lesions of certain points in the cortex of the brain.

The case I refer to here is the only one I have ever met with where the hemorrhagic affection had every character of an *essential disease:* that is, one not symptomatic, not developed on the foundation furnished by another well-defined primary disease, such as variola, typhus, phosphorus-poisoning, leukæmia, protracted icterus, or progressive pernicious anæmia.

The primary cause of this affection must of course be looked for in some disturbance of the physiological relations existing between the blood and the walls of the blood-vessels. The results furnished by examinations of the blood are negative, and there is also an absence of all macroscopic changes in the walls of the vessels. It would seem that the difficulty must be located in the nervous centres presiding over the calibre and tonicity of the vessels.

Prof. D. Hayes Agnew saw the case that came under my care together with me, and he informed me that he had seen a case once before, and in this, a young lady, the affection he was confident was the result of a violent fall on the back while skating. Respectfully yours,

WALTER F. ATLEE, M.D.

210 SOUTH THIRTEENTH STREET.

OBITUARY.

ELLERSLIE WALLACE, M.D., Emeritus Professor of Obstetrics in the Jefferson Medical College, died March 10, at his residence in this city. He was a native of Philadelphia, was born June 15, 1819, and was of Scotch descent. He received his academic education at Bristol College, and then entered the Jefferson Medical College, from which he was graduated in 1843. He was then elected resident physician of the Pennsylvania Hospital, a position which he ably filled for three years. He resigned to become Demonstrator of Anatomy in the college from which he was graduated in 1846, and held this position for sixteen years.

In 1863, Dr. Wallace became Professor of Obstetrics and Diseases of Women and Children in the College, being the immediate successor of Prof. Charles D. Meigs, and filled with distinction this position until 1883, when he resigned on account of failing health. He also filled the position of Dean of the College as the successor of Prof. Biddle. Two weeks ago he became very much worse, and death resulted from erysipelas of the head. A physician of thorough knowledge of general medicine as well as of his special department, he had a large family practice. Of a retiring disposition, he shrank from entering the lists with those who write for notoriety, and therefore only occasionally contributed articles to medical journals. As a lecturer he had few equals, being possessed of a special faculty of imparting knowledge, his lectures being demonstrative and frequently abundantly illustrated.

Dr. Wallace had a large sympathy, a broad philanthropy, a heart full of Christian kindness, and a genial nature, which endeared him to his patients and made for him many warm professional friends, by whom his loss will be deeply felt.

HOWARD HOSPITAL AND INFIRMARY FOR INCURABLES,
PHILADELPHIA, February 27, 1885.

At a special meeting of the members of the Medical Board, held this day, called to take action upon the recent decease of the late President of the Board, it was

Resolved, That the members of this Board feel that in the death of Joseph Klapp, M.D., they have sustained a severe loss.

A gentleman who, by his eminent skill and devotion to his profession, and his conscientious performance of all the duties pertaining to his official position, and the unwavering interest ever shown by him in his devotion to the welfare and success of this hospital; by his courtesy and kindness to his fellow-members and his urbanity, always manifested as well to general society as to his professional brethren, has endeared himself to the members of this Board, who will ever cherish with kindest regard the remembrance of his many noble and manly traits.

Resolved, That we hereby express our warm and high appreciation of his professional services gratuitously rendered this hospital during an unbroken period of more than thirty years, in a spirit of unwavering devotion to and earnest desire for its prosperity.

Resolved, That we tender to his family the expression of our earnest sympathy in their bereavement, and pray that a loving Providence may soothe and alleviate their great sorrow and loss.

Resolved, That, as an expression of our sincere regard and esteem for his memory, we will attend his funeral in a body.

Resolved, That the foregoing be entered upon the minutes, and a copy be sent to the family.

T. HEWSON BRADFORD,
Secretary.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 1, 1885, *TO MARCH* 14, 1885.

ARMY MEDICAL BOARD to meet in New York City, April 6, 1885. Detail for Board: Lieutenant-Colonel Joseph B. Brown, Surgeon; Major Anthony Heger, Surgeon; Major John H. Janeway, Surgeon. Surgeon Heger to be relieved from duty in Department of the East, and Surgeon Janeway to perform duties on the Board in addition to his present duties. S. O. 56, A. G. O., March 11, 1885.

BYRNE, CHARLES C., MAJOR AND SURGEON.—Ordered to Department of the East on expiration of his present leave of absence. S. O. 50, A. G. O., March 3, 1885.

BROWN, H. E., MAJOR AND SURGEON.—Granted leave of absence for one month, with permission to apply for two months' extension. S. O. 48, Department of the East, March 6, 1885.

WOODRUFF, EZRA, CAPTAIN AND ASSISTANT-SURGEON.—Ordered for duty at Fort Maginnis, Montana Territory. S. O. 23, Department of Dakota, February 25, 1885.

TAYLOR, BLAIR D., CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended two months. S. O. 54, A. G. O., March 9, 1885.

PORTER, J. Y., CAPTAIN AND ASSISTANT-SURGEON.—Sick-leave of absence further extended fourteen days on account of sickness. S. O. 51, A. G. O., March 5, 1885.

EWING, C. B., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Having relinquished unexpired portion of leave of absence, ordered for temporary duty in the field. S. O. 23, Department of Missouri, March 2, 1885.

RAYMOND, HENRY I., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—(Recently appointed.) Ordered for duty in Department of California. S. O. 50, A. G. O., March 3, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, APRIL 4, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON TYPHOID FEVER, ESPECIALLY WITH REFERENCE TO PROGNOSIS.

Delivered at the Hospital of the University of Pennsylvania

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of, and Professor of the Theory and Practice of Medicine in, the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—The patient before you to-day was admitted to the hospital seven days ago. We could obtain no definite history, but, as far as could be learned, the man had been sick for two weeks before admission, with delirium, continuous fever, hemorrhage from the bowels, and, for a day or two before he came in, with cough and rapid respirations. From this account it is probable that he was admitted at the beginning of the third week of an attack of typhoid fever complicated with pneumonia. The course of the case during the past week is indicated by the following notes:

January 3 (day of admission). There were no evidences of blood in the discharges from the bowel. The face was flushed, the tongue was dry and coated, and there were sordes on the teeth.

January 4. Had some delirium; belly moderately distended; several spots of typhoid-fever eruption were detected. There were several liquid stools, dark yellow in color. Shortly after admission the temperature was 103.4°. After this the temperature fell, and continued to diminish until two days ago.

January 6. More delirious, plucking at the bedclothes. Temperature not so high. Dulness over the right lower lobe of the lung posteriorly, and over the dull region the characteristic crepitant râles are heard. There is retention of urine, it being necessary to use the catheter. Temperature between 101° and 102°.

January 7. Still further fall of temperature. The dulness over the posterior portion of the chest is extending upward, having now reached the third rib. The restlessness, delirium, and plucking at the bedclothing have continued.

These symptoms continued through the 8th, but during the night of the 8th the temperature began to rise, and yesterday morning (the 9th) it stood at 101°. Last night it was 102.5°, and it is the same this morning: so that there has evidently been a renewal of the fever.

The treatment has been one of active stimulation. He has taken as much milk as we could get him to use, giving it in comparatively small quantities repeated every hour or hour and a half, with a small quantity of whiskey, so that he has averaged one ounce of whiskey every two hours since admission. In addition he has taken turpentine. I would mention that, since admission, the bowels have been open only once each day, with the exception of one day during which there were four stools, and again three days ago, when twenty-four hours passed without any stool. He has borne the turpentine mixture very well. For the excessive restlessness which he has presented he was last night given nine grains of musk.

We find our patient, then, this morning, at the beginning of the fourth week of the attack, delirious, with from time to time rolling of the head, with very little intelligence, with the mouth partly open and the teeth and lips coated with dry sordes. These sordes are nothing but the foul secretions of the mouth dried by the passage of the air over them. When a patient with typhoid fever has no obstruction of the nostrils, and retains sufficient intelligence to breathe through them, and keeps this up during sleep, sordes do not form so much; but when the patient sinks into a typhoid state, with dulness of mind, breathing is carried on through the mouth, and the secretions are rapidly dried and form crusts. This is largely owing to the fact that, as a result of the high temperature and the perverted state of the secretions, all the buccal secretions are thick and viscid and readily dry with the formation of crusts.

When told to protrude the tongue, he does so better than he did a few days ago. It is coated with a grayish-brown fur. As I have already stated, the temperature this morning is 102.5°. The pulse is very small, compressible, and 140 per minute. The temperature is well kept up; the hands and feet are warm. For the last day or two the distention of the abdomen has

been very great, and in order to remove this tympanitic condition turpentine stupes have been used every couple of hours during the night, and this morning the distention is somewhat reduced.

I shall not disturb him to demonstrate the signs of pneumonia. The dulness, however, does not extend anteriorly, and over the front of both lungs auscultation reveals the presence of vesicular murmur mixed with coarse râles, chiefly bronchial, showing that there is considerable bronchial irritation of both lungs, with consolidation of the posterior portion of the right lung.

This case illustrates the difficulties attending the treatment of typhoid fever in hospital practice. This man, having received no medical care, no proper nursing, and improperly fed, was admitted to the hospital at the end of the second week, by which time his vital powers had been exhausted and his digestion totally broken down, with diarrhœa of from four to six loose stools daily which had been allowed to continue; and, worse than all, with a pneumonia which very likely developed on account of his want of treatment. The late period at which he comes under treatment, the gravity of the nervous and abdominal symptoms, and the grave complication of pneumonia which he presents, make the prognosis unfavorable, and I expect this man to die. At the same time, the decrease in temperature which has taken place during the past four or five days until night before last, the subsidence of the diarrhœa, and the absence of vomiting, are favorable symptoms, and hold out a hope of his pulling through. The great danger is that the weakness of the heart, which has resulted from want of proper care and proper sustenance, is such that it will be unable to stand the strain, and that we shall have symptoms of heart-failure, increasing pulmonary engorgement, disturbed capillary circulation, deepening stupor, and death. Forty-eight hours will settle the question.

The complications of typhoid fever may be divided into the nervous, the abdominal, and the pulmonary. It is curious how different cases will present these complications in different degrees of severity. Scarcely ever will they be found equally well marked. As a rule, when the nervous symptoms are marked the abdominal are not. The combination of marked nervous and pulmonary symptoms is more common. In some of the worst cases of the abdominal complications of typhoid fever, such as copious and intractable diarrhœa, hemorrhage, and great distention of the abdomen, the brain is perfectly clear. In the present case the abdominal symptoms seem to have been marked in the early stage. The man had more or less diarrhœa; but this may have been due to want of proper care, for as soon as he came under proper treatment the diarrhœa ceased, and now he has but one stool a day.

We estimate the gravity of an attack of typhoid fever, in the first place, by the range of temperature. If the temperature is not above 104° it is not an unfavorable sign. If it reaches 105° but does not remain at that point, it is not serious. Anything above 105° we term hyperpyrexia, and this is a dangerous sign, particularly if the temperature remain almost continuously, day and night, above 105°. When, however, as in the present case, the temperature ranges between 101° and 104°, and does not exceed this latter point, it does not become a source of much added danger. In children and in sensitive women a temperature of 105° is often reached and maintained for some time without serious danger. It is important to recognize this fact, for it will save the necessity of resorting to powerful measures to reduce the temperature. Far too much importance—or, rather, far too exclusive importance—is nowadays attached to the study of the temperature in febrile diseases. It is important, and should be carefully watched, for it aids both in prognosis and in treatment; but the ease with which thermometric observations are made, their accuracy as contrasted with the manner in which many other symptoms have to be studied, and the certainty which they seem to give in studying the course of the case, are apt to divert our attention to too high a degree from the study of the pulse, the nervous system, and the digestive organs; whereas, as a matter of fact, the temperature in many cases is less important than information drawn from the other points to which I have referred. Particularly I am sure that we allow our treatment to be governed too exclusively by this question of temperature, and are too prone to resort to powerful antipyretics, which sometimes are depressing, irritating, and disturbing.

Many cases of typhoid fever do perfectly well without severe antipyretic treatment, even though the temperature be high. It is only when the nervous symptoms and the condition of the heart indicate that the high temperature, in the absence of other complications which would account for the symptoms, is acting as a disturbing element on the brain and the heart that it calls for active treatment. Then we should resort to any plan of antipyretic treatment which is efficient, as large doses of quinine or the external use of water. So long as the high temperature is maintained without manifest injury being inflicted on the brain or the heart, it is better to avoid powerful antipyretic measures and to allow the case to run its normal course. This is particularly applicable where there are complications which are of themselves sufficient to maintain the high temperature and account for a certain amount of nervous irritation. Under such circumstances these powerful remedies often do more harm than good.

Among the indications to be considered in the prognosis I have mentioned the heart and the pulse. This is exceedingly important. I think that the study of the sounds of the heart—of the strength of the muscular or first sounds of the heart, the strength of the impulse, the way in which the artery fills at the wrist, how it resists pressure, the quality of the beat, the frequency of it, and its regularity—is of the first importance in the prognosis of typhoid fever and as a guide to treatment, particularly in regard to the important question of the administration of stimulants. You have a patient with a dry, brown tongue and marked nervous symptoms. It may be difficult to decide whether he needs remedies of a sedative character, and perhaps counter-irritation, to quiet the nervous restlessness and draw the excitability from the nerve-centres, or whether he requires stimulation to raise the tone of the circulation and cause a healthier tone of action in the nerve-centres and thus bring about a secondary quieting or sedative effect. The best test of this is the action of the pulse and the influence of stimulants on the pulse. In a case where the pulse is from 120 to 140 per minute, very compressible, so that it collapses under the slightest pressure, with an exceedingly weak first sound, so that it assumes almost a valvular character, stimulants may be given freely; and under their use, as a rule, the temperature will fall, dryness of the mouth will lessen, and the nervous symptoms will improve. These results indicate that the stimulants are doing good, and encourage us to continue or to increase them.

This man needs free stimulation, and if he can stand one ounce of whiskey every hour we will not hesitate to give it to him through the next two or three days, to tide him over this crisis, for unless the heart is kept up I fear that he will die in the way which I have mentioned.

Symptoms referable to the abdominal organs afford some help in prognosis, but they are not as reliable as the evidence presented by the temperature and the circulation. The amount of diarrhœa which the man has had has not been very serious, but yet I think that diarrhœa in typhoid fever is not a good thing. I do not regard it as an evidence of the efforts of nature to eliminate the poison from the system. On the contrary, it is to me an evidence of active disease in the intestinal canal, of imperfect digestion of the food taken, of the presence in the intestines of putrid, irritating secretions. It is undoubtedly better that such irritating secretions should be discharged than that they should be locked up in the bowel to undergo putrefaction and probably furnish fresh poison to be absorbed. If, however, by regulated diet, by the avoidance of irritating remedies from the earliest moment that typhoid fever is suspected, and by the use of remedies suitable for the disease of the glands which is certainly going to develop, we can render the matters which enter the intestine so easily digestible and assimilable that they will not putrefy, we may keep the secretions in a less putrid state, and thus diminish the diarrhœa. I think that the early treatment of a case of typhoid fever has more to do with the state of the bowel than anything else. It frequently happens that when a patient presents himself to a physician in the early stage of typhoid fever he is given a laxative, with the idea that he is suffering from a slight catarrhal attack from irritating matter. As you know, one of the diagnostic signs in the early stage of typhoid fever is the remarkable effect from a laxative. It will produce several loose stools; and when the physician sees this his attention is directed to the possibility of the case being one of typhoid fever. But

I do not know that much is gained by this therapeutic test. Suppose the case were only one of catarrh of the intestine, allowing the bowels to remain quiet would prolong the case only twelve or twenty-four hours, the irritating matters would be discharged, and the patient would have taken nothing to increase the trouble; but if the case is going to be one of typhoid fever, the patient has on the brink of ulceration a number of glands throughout the intestinal canal, and then I think that even the mildest laxative is undesirable and may be directly harmful. I have no doubt that many cases of typhoid fever have this intestinal element, and are made serious by injudicious management during the first forty-eight hours. What is wanted is absolute rest, absolute diet, and absolute avoidance of direct medication until the disease indicates what it probably is going to be. When diarrhœa is present, it is to be checked, not by the use of opiates to lock up the bowel, but by reducing the food taken until we obtain that which can be absorbed. The ordinary principles of alimentation are as true in typhoid fever as they are in health. It is not that which is put in the stomach that does good, but it is that which the stomach is able to absorb and appropriate and put in such a condition that when it enters the intestinal canal it shall be readily absorbed. It is useless to pour three ounces of milk one hour and three ounces of beef-tea the next hour into a patient who is not really absorbing more than half an ounce in the twenty-four hours. The more food is given under these circumstances, the more is digestion deranged. Fermentation takes place, and the abdomen is greatly distended from the accumulation of gas. I should try to check the diarrhœa by reducing the diet to a point where the patient is able to assimilate it, by the use of remedies directed to heal the irritated mucous membrane, and by the use of opiates only in small quantities. Opiates to check the diarrhœa of typhoid fever usually do as much if not more harm than good. A continuance of diarrhœa is often well borne, particularly if the stools come from the lower bowel as a result of the discharge from the ulcers, and do not come from want of absorption of the nourishment which is taken. If they are not associated with great tympanitic distention of the belly, or with marked failure of the pulse, or with severe nervous symptoms, a certain number of loose stools may be borne without particular harm. When, however, there is continued diarrhœa, with frequent copious stools, particularly if discharged unconsciously, with distention of the abdomen, showing that the intestinal muscles and the muscles of the abdominal walls are paralyzed, the prognosis is extremely bad, for such diarrhœa is apt to prove uncontrollable.

Another symptom referable to the abdominal condition of the intestines is hemorrhage. Hemorrhage from the bowel often occurs as a hemorrhoidal discharge and means nothing serious. Slight hemorrhages occurring early are not of evil omen, and hemorrhage occurring at the time that the sloughs are cast off may not be serious; but where the bleeding is frequently repeated and the amount lost is large, and where it is associated with diarrhœa and great tympanitic distention of the abdomen, it indicates such prostration of vitality and such dyscrasia of the blood as to render the prognosis very unfavorable.

The tympanites which this man has had amounted to a serious trouble; and sometimes the tympanitic distention goes so far as to constitute an important element in the prognosis. It indicates, in the first place, a paralytic state of the muscles of the abdominal walls; and in the second place it indicates fermentation of the ingesta and deficient digestion and absorption. This distention, by its pressure upward, causes marked interference with respiration and adds greatly to the effects of any pulmonary trouble which may coexist. Distention of the abdomen in typhoid fever should be studied in this way so as to be traced to its proper cause. If it is the result of muscular debility, it will be helped by stimulating applications. Strychnia is particularly useful in these cases. If it is the result of fermentation of the ingesta, it may often be diminished by peptonizing the food and by the internal use of carbolic acid and creasote, which will lessen fermentation. Where the accumulation of gases interferes with the action of the diaphragm, an attempt should be made to draw off the gases by a rectal tube. This operation usually has to be repeated, and I have even been forced to puncture the abdominal wall with a hypodermic needle to draw the gases from the intestine; and I have

seen patients recover where I have had to do this on several successive days on account of interference with respiration. As a rule, however, when it comes to this point death follows.

I shall add to the large amount of alcohol which this man is taking one-fortieth of a grain of strychnia four times a day. This will be dissolved in weak alcohol and water and thrown under the skin of the abdomen.

The pulmonary symptoms of typhoid fever afford very important elements in prognosis. We should never let a day pass without examining the lungs and heart of our typhoid-fever patients. A certain amount of bronchial irritation is an almost constant element in typhoid fever. Usually by the end of the second or during the third week we find hypostatic congestion, with a little impairment of resonance, weak vesicular murmur, and crepitant râles on inspiration over the lower lobes behind. This we consider an almost inevitable feature of the disease; but when, instead of merely a hypostatic congestion, the disease, as here, goes on to consolidation, and, as you observe, is unilateral, not symmetrical as is hypostatic congestion,—not limited to the lower lobes, but involving first the lower lobe and then extending to the upper lobe, with bronchial respiration and with coarse, crackling râles,—we know that it is not merely an exaggerated degree of that congestion incident to the disease, but that it is a real complication, a croupous pneumonia.

As I have said on another occasion, the typhoid state and pneumonia present different relations to each other. Pneumonia may be present and run into the typhoid state. This really is typhoid pneumonia. Again, there may be typhoid fever and pneumonia occurring as a complication; but this has nothing to do with typhoid pneumonia. It is typhoid fever. The pneumonia is a purely intercurrent, accidental phenomenon, a true complication, —and it is a complication of great gravity. Sometimes it takes the form of catarrhal pneumonia; and this is even worse than croupous pneumonia. It is apt to be associated with extensive collapse of the lung. The areas affected multiply and spread, and exudation and softening occur: so that, on the whole, catarrhal pneumonia complicating typhoid fever is even more unfavorable than croupous pneumonia, except the extent of the latter be very great; but either of them is a grave complication and adds largely to the mortality. If it comes upon a patient with bad typhoid fever, already reduced by other symptoms, as diarrhœa, and who presents evidences of nervous exhaustion and failure of cardiac power, the chances are that the patient will die. The prognosis is rendered graver by the existence of the serious pulmonary complication, and this is an indication for vigorous stimulation. The amount of alcohol should be increased, as much concentrated nourishment as the digestive organs will stand should be given, and carbonate of ammonia and turpentine administered internally. In this case turpentine in the dose of ten drops in emulsion every three hours has been given for the tympanitic distention of the abdomen, and has been found to act satisfactorily. It will therefore be continued.

Lastly, this case is instructive in regard to the nervous symptoms, which are always valuable in prognosis and treatment. We expect a certain amount of nervous disturbance in these cases, and rarely is it wanting. Occasionally it is absent, and this year particularly I have seen an unusually large number of cases of typhoid fever which were characteristic in other respects, but presented no nervous symptoms whatever. Another curious fact is that in many cases during the past year the abdominal symptoms were wanting, and many cases presented constipation, so that it was necessary to use an enema every third or fourth day. In some cases I gave once a week a grain of calomel in one-tenth of a grain doses, followed by an enema. As a rule, however, we expect some nervous disturbance. As long as it is only a little night-delirium it is not an evidence of much danger. This is, of course, more marked in those of a nervous temperament. When it deepens into marked hebetude with tendency to stupor, or, still more, when it takes the form of constant, restless delirium, with quick, suspicious glances of the eye alternating with dulness, with constant twitching even when the patient seems to be asleep, with plucking at the bedclothes, it is a symptom of gravity. Other grave nervous symptoms are struggling constantly to rise and slipping down in the bed as from muscular

debility. I need not say that profound stupor and convulsions are very serious symptoms. This man has presented twitching of the tendons, picking at the bedclothes, and almost constant delirium in a marked degree ever since he has been under observation. As a rule, the nervous symptoms of typhoid fever are evidences of debility and call for a stimulating plan of treatment. When in the early stage of the disease they are present, with marked arterial excitement, flushing of the face and injection of the eye, they are indications for counter-irritation and a sedative plan of treatment. In the present case the nervous symptoms have been such as to call for stimulation, and as he has been stimulated the nervous symptoms have diminished. Here, then, is an important guide for treatment. If under the use of stimulants the nervous symptoms diminish and sleep become more natural, we know that the stimulants are doing good.

This patient is bearing stimulation very well. The only question is whether or not we can stimulate him enough to tide him over the next twenty-four hours. He will be given eighteen to twenty-four ounces of whiskey in the twenty-four hours, ten drops of turpentine every three hours, and one-fortieth of a grain of strychnia hypodermically four times a day, and if he is restless at night the musk shall be repeated.

[This case was again presented to the class two weeks later. An abscess of the parotid had formed and opened, but the patient was greatly improved, and had been free from fever for several days. At this time the quantity of stimulus, which had been reduced, was still further reduced, so that he received half an ounce every two hours. He was also ordered a mixture containing one-fortieth of a grain of strychnia, two grains of quinia, five drops of dilute hydrochloric acid, ten minims of compound tincture of cardamom, and sufficient water to make one drachm. This was to be taken four times a day, and constituted the only treatment. The patient made a rapid recovery. REP.]

IODOFORM-POISONING.—A case of fatal poisoning after colporrhaphy, from the free use of iodoform in the vagina after the operation, is reported by Dr. E. Schwatz in the *Berliner Medicinische Wochenschrift*, No. 7, in which there is also a valuable paper on iodoform-poisoning by Prof. Harnack.

ORIGINAL COMMUNICATIONS.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,
Ophthalmic Surgeon to the Episcopal Hospital.

COCAINE.

DR. H. KNAPP contributes a paper on "Cocaine" which contains a summary of what has been written about the drug, and also his own experience from its use in ophthalmology. "Cocaine is of the greatest benefit in cataract operations." In needle operations there is less liability to prolapse of vitreous, incarceration of the iris or capsule in the corneal wound, owing to the diminished ocular tension induced by the drug. So also in cataract-extraction. Knapp has not as yet applied the cocaine to the wound or injected it into the anterior chamber, a procedure which he does not advise. A marked diminution of the eye-tension is noted after the use of cocaine: the cornea will wrinkle and sink in after the expulsion of the lens. As a consequence of the decreased tension, the iris rarely prolapses spontaneously. In twenty-four extractions under cocaine there was only one case of corneal suppuration, possibly due to other causes. Knapp has made five iridectomies in glaucoma under cocaine. In one case, although a good-sized opening had been made with the lance, the aqueous escaped only after introduction of the forceps,—showing the greatly diminished tension. In another case the pupil was so widely dilated that it was with difficulty seized with the forceps. Knapp warns against the danger of the patient suddenly rolling the eye when the iris is excised, as the cocaine does not seem to dull the sensitiveness of the iris. Eserine is the proper corrective of the cocaine mydriasis: it induces full pupillary contraction, even in spite of subsequent instillations of cocaine; at the same time the anæsthesia is not diminished. In an enucleation cocaine was injected in the neighborhood of the optic-nerve entrance in the sclerotic. There was little or no pain in the operation except that resulting from the division of the muscles. As a rule, cocaine should be applied by instillation. In special cases subcutaneous injections may be used. Caution should be exercised: injections of five or six minims into the lids have induced unpleasant general symptoms. The

combined effect of atropine and cocaine in iritis is useful. The pain is relieved and the course of the disease shortened.—*Arch. of Ophthal.*, December, 1884.

[A glance at the already extensive literature of cocaine shows that the drug is being used with a freedom that indicates a general belief in its incapability of doing harm as a local application, at least in the solutions ordinarily used. It is, however, probable that any agent which acts like cocaine is capable of mischief when indiscriminately used. The primary effect of the drug, when applied to the conjunctiva, seems to be upon the fifth nerve, possibly upon its epithelial endings, if the term may be used. The result is that their important function for the time being is abolished. One may study in this connection the cases of conjunctival xenosis, also those of keratitis, due to injury of the fifth nerve. Eberth has advanced the idea that the latter is really a mycotic affection, the withdrawal of the influence of the fifth nerve favoring the development of bacteria in the cornea. There is strong ground for believing this to be true. It is a pertinent question whether cocaine may not induce the same condition. There is, so far as the writer has seen, no recorded instance of its damaging a healthy eye: perhaps the effect lasts too short a time to induce disease. It is, however, conceivable that an eye may be on the verge of disease and be precipitated into ruin by the cocaine. Further evidence is already making its appearance showing that it is an undesirable application in cataract-extraction. Knapp has had one case of corneal suppuration in twenty-four extractions, and this he thinks was possibly due to other causes. Keyser (*Therapeutic Gazette*, January 15, 1885) collects four cases of panophthalmitis after cocaine. The first case was a perfectly smooth operation for senile cataract. In the second case the cataract was traumatic, complicated with an anterior synechia which was causing sympathetic irritation. In the third case, operated on by Dr. Strawbridge, the extraction was performed without complication. The fourth case was one of occluded pupil, for which an iridectomy was made by Dr. Koser. In all of these a panophthalmitis developed ten or twelve hours after the operation.* All this is calculated to chill the enthusiasm over the use of cocaine, at least in all operations requiring an extensive corneal incision. To what degree the mere removal of a lens by a typical extraction, or the tearing asunder of synechiæ, or the mere corneal section, may contribute to the unpleasant result cannot as yet be told. The essential, however, may be assumed to be the anæsthesia of the fifth. If some means could be found to overcome this, then possibly these bad results might be obviated. Eserine does not appear to antagonize the anæsthesia; possibly aconitia might do it. Aconitia certainly irritates in some way the fifth nerve, as the profuse lachrymation following the use of the oleate shows. H.]

* Dr. Strawbridge informs me that in his case the inflammation commenced twenty-four hours after the operation. H.

XEROSIS CONJUNCTIVÆ.

Dr. Richard Schulz reports the following case. The patient was a badly-nourished child, æt. 20 weeks. There were no lung-symptoms, no vomiting or spasms. Tendency to diarrhœa, very frequent pulse, temperature 103.3°, were noted. The eyes were closed, and had been so for eight days. There was a large ulcer of the left cornea; the right cornea was very much clouded. The conjunctiva of each eye was of a pale rose color, dry, with a white, fat-like deposit upon it. Dr. Ferge, an oculist who saw the case in consultation, pronounced the case one of conjunctival xerosis and gave a fatal prognosis. The case gradually grew worse. Catarrhal pneumonia set in, and the child died on the twentieth day of the disease. Examination of the conjunctivæ before death showed the epithelial cells covered with micro-organisms, as described by Leber. No mention is made of fatty changes in the epithelial cells. In the post-mortem examination bacilli similar to those noted in the conjunctivæ during life were observed in the bronchi and upon the epithelium covering the papillæ of the kidneys. The liver was fatty. —*Graefe's Arch.*, 1884.

[This case, so far as it goes, is confirmatory of the interesting and valuable researches of Prof. Leber on this disease. An account of these researches, together with a summary of what is known about the disease, will be found in an article in the "Transactions of the State Society of Pennsylvania," entitled "Epithelial Mycosis." The disease is of interest to those

engaged in general practice, as Dr. Schulz's case shows. It is probable that the disease occurs in this country oftener than is generally supposed, its severe general symptoms and fatal character leading to faulty diagnosis. It should be remembered that the pneumonia in the above case was not an accidental complication, but is part of the disease. The name of conjunctival xerosis is faulty, as the epithelium of various portions of the body is affected. The disease is better described as "A Form of Epithelial Mycosis." H.]

AMBLYOPIA FROM MENSTRUAL HEMORRHAGE IN TYPHOID FEVER.

Dr. C. Williams reports the following case. Mrs. L., æt. 22, was attacked with typhoid fever: on the eighth day of the disease her menses appeared. In quantity the discharge was less than usual, although considerable. At the end of the epoch and in daylight, surrounding objects suddenly appeared brilliantly illuminated for a few moments, when it seemed to the patient as if the darkness of night had suddenly fallen. The attendants found the patient much alarmed; pupils widely dilated and immovable, and unable to see the motion of the hand. When Dr. Williams saw her, probably a day or two later, the pupils had regained their normal size and reaction, and fingers could be counted at two feet. Optic disks were very white, retinal arteries thread-like, veins in comparison large, though smaller than normal calibre. There was a dim gray reflex from the retina and a want of perfect transparency, such as Dr. Williams had observed in retinæ at the moment of death; no hemorrhages. The case gradually improved, and in two months normal vision had almost recurred. Dr. Williams calls attention to the fact that, while amblyopia from gastric or intestinal and also from uterine hemorrhage is known to occur, it is exceedingly rare to find it as a sequel of the ordinary menstrual flow, even when grave general disease exists. In this case there was neither gastric nor intestinal hemorrhage. He supposes that an excitation of the pelvic or abdominal ganglia, conveyed through the ciliary ganglia, may have induced a tonic contraction of the retinal arteries and a contraction or dilatation of the pupil.—*Arch. of Ophthal.*, December, 1884.

[This case is one of great interest. The reviewer thinks that this case, as well as cases of amblyopia from gastric and intestinal hemorrhage, is to be looked upon as the result of sudden and abnormal decrease in the general arterial tension. The arterial vessels within the abdomen regulate the general blood-tension to a very great extent. If hemorrhage occur from any arterial area within the abdomen, then we may expect a decrease in the general tension. In many instances, doubtless, the blood-vessel system instantly antagonizes the abnormal tension, and no harm results. The ordinary menstrual flow in a healthy person is not apt to induce disturbance of sight. In Dr. Williams's case, however, there was another factor: it was a case of typhoid fever, and, we may assume, accompanied by the usual intestinal lesion. It is probable, therefore, that the superior mesenteric artery was more or less involved, and that the condition of the arterial circulation was such that the menstrual flux was sufficient so to decrease the general arterial tension that the retinal function was abolished. The reviewer thinks the cases of loss of sight after uterine hemorrhage are to be explained on the same general principle. H.]

HOMONYMOUS SUPERIOR HEMIANOPIA.

This name is applied to a defect of sight characterized by the absence of the *upper* halves of each visual field. Dr. Wiethe reports the following case. A laborer, æt. 54, applied for treatment on account of sudden loss of sight which had occurred the previous day. Two years before, he had had an attack of acute articular rheumatism, followed by shortness of breath. Four months before the loss of sight, he fell from a ladder, striking the occiput; was unconscious for several hours, and bled from mouth, nose, and ears. He recovered consciousness experiencing violent headache. There was no vomiting or paralysis. His memory and will-power became impaired, and there were frequent attacks of headache. Perhaps two months after the fall there was a stroke of apoplexy, with left hemiplegia, but in a few weeks he was able to work again. Several weeks later, while raking hay, the eyesight suddenly became impaired. It gradually grew worse, and at the end of an hour and a half was entirely abolished. The day following, examination revealed the following: pupils equally and widely dilated, not responding to light; eyeballs immovable; visual

lines nearly parallel; lids widely separated; media clear; no abnormality of the retinæ or optic nerves; paresis of the left facial nerve-twigs supplying the lips, nostril, and eyelid; deviation of tongue to the right; sense of smell, as tested by turpentine, absent; no loss of sensibility in the skin or power in the extremities; gait steady; cardiac dulness increased—the sounds abnormally loud; pulse 60, strong, jerking, incompressible; mind clear, but intense headache. Under treatment, eyesight improved sufficiently for him to walk about. The pupils contracted to medium size. The eyeballs became movable in all directions except upward. Examination of the fields showed the upper halves to be defective: the boundary-line of the right coincided with the horizontal meridian, while in the left it was eight or twelve degrees above it. In the latter a narrow zone of amblyopia seemed to exist in the inferior half of the field.

Nine and a half months after the attack of blindness, death occurred from hernia. Post-mortem revealed atheroma of the arteries at the base of the brain, old hemorrhagic foci in the temporal lobe, lenticular nucleus, medullary substance of the frontal lobe, cortex of the sulcus olfactorius, of the parietal lobe, and left optic thalamus; chronic pachymeningitis; eccentric hypertrophy of the left ventricle of the heart.—*Arch. of Ophthalmology*, December, 1884.

[Dr. Wiethe adds a careful study as to the possible locality of the lesion in this case. It is based mainly on the supposition that there must have been pressure from a clot upon one or more areas of brain-tissue. Granted that the brain is an organ capable of being divided into areas, each of which is necessary for the performance of a given function, the argument is that if in certain cases of intercranial disease a given function is abolished, we *have to do with pressure on the corresponding spot.* This method of reasoning has been recently illustrated in Hughes Bennett's case, in which a tumor was localized and removed by operation. There is one important thing, however, to be remembered. The brain is not a dead organ composed of a certain number of tissue-blocks, any one of which may be removed, or pressed upon, or destroyed, without interfering with the other. It is a living organ, and when a given function is abolished we may not immediately jump to the conclusion that the *starting-point* of the trouble is at the locality in which the function is lost. There are other factors to be considered besides the mere mechanical pressure. In this case of Wiethe's we have to do with a pronounced degeneration of the vessel-coats. Doubtless there was an abnormal state of the intracranial circulation. It is not necessary to bring in the pressure of a clot in order to explain the case. The blood might easily have failed to circulate in certain areas without a clot having formed at all. The function of the retina is often abolished in this way, and by analogy we may suppose the intracranial functions may also thus be lost. H.]

OPHTHALMA-LEUCOSCOPE.

This instrument, based on the leucoscope of Helmholtz, has been devised by Dr. Arthur König for the detection of color-blindness. The instrument consists of a tube containing in the anterior part an apparatus for polarizing light. The polarized rays then pass through a Nicol prism, and are examined by a telescopic system of lenses in the posterior part of the tube. If white light be allowed to fall into the instrument it will appear to the observer looking through the telescope to be broken up into complementary colors, the intensity of which can be varied,—*e.g.*, by rotating the Nicol prism. By a person with normal color-sense the distinction between the complementary colors will always be recognized, but for a color-blind observer the apparatus may be so arranged as to cause the complementary colors to appear exactly alike. Experience seems to show that the form of color-blindness may be known at once from the position of the index of the instrument, which shows the rotation of the prism necessary to produce apparent similarity of the colors.—*Bericht. Ophth. Gesellschaft*, 1884.

EXCISION OF THE RETROTARSAL FOLD IN TRACHOMA.

Schneller reports encouraging results in trachoma from the excision of the retrotarsal fold. This treatment originated with Heissrath, who limited it to cases of trachomatous pannus. Schneller observed that not only the pannus was favorably influenced by the operation, but also that the trachomatous condition of the palpebral conjunctiva disappeared. He therefore employs the operation in cases of trachoma without corneal complications. The operation is as follows. The eyelid is everted,

the ball fixed and drawn downward if the upper fold or upward if the lower is to be excised. The retrotarsal fold is grasped by a forceps adapted for the purpose (the blades are fenestrated and shaped like the Desmarres forceps, and when applied will grasp the whole length of the retrotarsal fold). It can then be cut off with blunt-pointed scissors. The breadth of the piece excised varies from three to eight millimetres, according to the swelling. The bleeding is stilled, the conjunctival surface washed with sublimate solution, and wound dusted with iodoform. This is repeated daily. In eight days the wound is healed, with linear cicatrix. The results are: 1. The duration of the clinical treatment is shortened from six to eight weeks to about twenty-eight days. 2. The linear cicatrix exercises no evil influence, so far as can yet be observed. 3. Pre-existing corneal complications heal with great rapidity. This seems to progress with the healing of the wound. If the latter be delayed, the corneal complications disappear more slowly. In favorable cases, in ten to fourteen days the cornea is smooth, pannus-vessel scarcely perceptible. If wound-granulations occur, then the corneal complications become worse. 4. The vision is considerably improved. 5. Recurrence of the disease has not been noticed.—*Graefe's Archiv*, 1884.

NERVOUS SHOCK AS A CAUSE OF PERNICIOUS ANÆMIA.

Read before the Philadelphia County Medical Society, February 25, 1885,

BY ROLAND G. CURTIN, M.D.

IT is not my desire or intention to go into a discussion as to the nature and symptoms of pernicious anæmia, but simply to narrate the history of three cases, which may perhaps assist in throwing light upon the cause of this interesting disease. Dr. J. H. Musser informed me that he intended to read an elaborate paper on the subject of pernicious anæmia, and, as these cases bear upon an obscure point in the disease, I thought it proper to report them at this time.

In the year 1881, Dr. B. F. Baer kindly requested me to meet him in consultation over a case the history of which is as follows:

A. B., 38 years of age, single. She had always been healthy, with the exception of painful menstruation (pain only during the flow). She continued in her usual health until 1877, at which time she sustained a very great shock, the details of which are now given. Her brother married a woman whose birth, education, and manners unfitted her for association with her husband's relatives. Being never congenial in any respect, the two families became more and more estranged, until finally all intercourse ceased. One day the patient received a postal card which asked her to come and take charge of her brother. She proceeded at once to his humble home, and, entering, passed through the front room. The shutters being closed darkened the room, and she groped her way to the door of the back room and opened it. When near the stairs the wife came down and simply asked her to return to the front room. A shutter was opened, and the wife, throwing a sheet back, exposed the head and upper part of the body of her brother, and suddenly revealed a horrible gash in his neck, reaching from ear to ear. He had committed suicide. She was at the sight paralyzed with fright, horror, and sudden grief. From that time she was never well. Following this she became slightly emaciated and gave evidence of nervous and muscular debility, which gradually increased. One year prior to her death, and about two years after the occurrences of the foregoing narrative, her menses became scanty, but continued regular. From this time she began to run down more rapidly until September (five months before her death), at which time the attention of her friends was attracted by her pallor of skin. She was then treated for malarial anæmia, neurasthenia, etc., by rest-treatment, milk-treatment, iron, quinia, arsenic, etc., but without any material benefit. She became progressively weaker and weaker, so that at the time when I visited her she was scarcely able to leave her bed. The symptoms were as follows. After the least exertion she became prostrated and complained of palpitation of the heart. Her skin was blanched, and had a white, waxy, translucent appearance. The whole body seemed rather puffy, but there was no pitting on pressure; conjunctiva, lips, gums, ears, etc., were apparently bloodless; her pulse was large, weak, and compressible; it was not accelerated while she remained quiet.

There was a marked systolic basic murmur transmitted into all the larger blood-vessels. It could be heard, being very plain to the left of the vertebræ, down to the end of the aorta. There was a marked venous hum in the jugulars. Little or no fever was noticed, so far as I could learn; she had no hemorrhage from any part; she had occasionally some vomiting, but no more than could be accounted for by the impaired digestion caused by the impoverished blood, which could not supply good gastric juice; her bowels were never disturbed, except during the time when she was under milk-treatment,

taking large quantities of milk which she was unable to digest, when it was passed off as curdy stools; the blood was not examined; the urine contained no albumen or tube-casts; neither the spleen nor the lymphatic glands were enlarged. Death occurred from exhaustion within a short time after I saw her, —viz., four years and two months after the great shock itself.

This case seemed to point so directly to severe mental shock as a cause of the earlier symptoms of ill health that I was deeply impressed.

Shortly afterwards, on the 14th of May, 1881, a patient suffering from pernicious anæmia presented herself at the Medical Dispensary of the University Hospital. From her I gleaned the following history:

Previous to four years before her first visit she had been a stout, robust girl. At that time (four years ago) she and her widowed mother were living a quiet, happy life, supported by an only brother, who was a conductor on the Philadelphia, Wilmington and Baltimore Railroad. One day they received a despatch that he had been injured on the railroad, and that he was in Chester. The patient went down by the next train, and when she landed on the platform asked an employé where she could find her brother. He coolly informed her that she had passed his body on its way to Philadelphia. She immediately fainted, and continued to faint for some days afterwards. This was followed by great nervous prostration, which continued for three years. She then began slowly to grow pale and weak; these symptoms progressed steadily until the time when I saw her. She was then so pale that her skin, conjunctiva, and mucous membrane were apparently bloodless; feet and legs were inclined to be puffy; the slightest exertion caused palpitation and dyspnœa, so much so that she was scarcely able to walk; her appetite was poor, and she was almost unable to eat anything, and when she partook of a moderate meal of simple food the stomach refused to digest it, as shown by regurgitation of the food (no vomiting or retching), and also by laxity of the bowels. For the six weeks previous to her visit she had been growing rapidly worse; she had lost no blood from any part; menses regular, but very scanty, and accompanied by considerable pain in the sacral region. There was a soft systolic murmur over the mitral area and at the base of the heart, transmitted into the aorta, carotids, and subclavian arteries. She returned on the 21st of April (one week later), feeling a little more comfortable so far as her digestion was concerned. She was not able to return after this visit to the Dispensary, and I heard a month later that she was rapidly failing and near death's door. There was no examination of the blood; the urine was examined and found to contain no albumen or tube-casts; neither the spleen nor the lymphatic glands were enlarged.

Some time later, Dr. John H. Musser informed me that he had a well-marked case of pernicious anæmia. I asked him to inquire whether there had been any mental shock previous to the symptoms of the disease. He found that such had been the case, and kindly furnished me with the notes, which I will now read here.

Mrs. M., aged 42, five years previous to death sustained a terrific shock, on account of an attempt by her husband to murder her. This was followed by violent nervous excitement, verging on insanity, succeeded by gradual failure of health and by anæmia.

A comparison of these cases shows that the patients were in their usual health at the time when they received shocks, and in the first two cases the cause was profound grief, and in the last case the fear of being murdered,—both severe and depressing emotions suddenly presented to the victims. Intense excitement followed the violence of the shocks, and then came a period of ill health, shown by nervous prostration and debility of the muscular system, progressively and slowly increasing. In the first case this period lasted about three and one-half years; in the second case, about the same length of time; in the last case, four years.

Then followed the anæmic period, in which the patients grew rapidly worse. In the first case the anæmic period lasted about six months; in the second case, about five months; in the third case, one year.

It will be seen in these cases that the anæmic symptoms came on at such a late period afterwards that shock as a cause might easily be overlooked.

I think we can draw one conclusion from a study of these cases, and that is, that in some, if not all, cases *the disease is of nervous origin.*

How these changes are produced I am not able to say. In Addison's disease a fatal chronic blood-disease is associated, as many think, with disease of the sympathetic system. Perhaps the first effect of the shock is on the cerebro-spinal system, and later upon the sympathetic system, in some way modifying the nutrition of the blood.

I have seen in all six cases of pernicious

anæmia. Case No. 1 was the fourth which I had seen; Case No. 2 was the fifth case under my observation. In both these cases the disease followed shock. The sixth and last case I saw with my friend Dr. R. H. Hamill: in this case pregnancy seemed to be the exciting cause.

Prof. Gusserow, in the years 1868, 1869, 1870, and 1871, saw five cases of anæmia without any structural lesion in pregnant females, in which cases the delivery took place at the eighth month, and death soon followed in spite of the best therapeutic measures. In reading the above it occurred to me that perhaps in these cases the despondent mental condition consequent upon pregnancy, or the shame, anxiety, and remorse caused by the carrying of an illegitimate child, may have operated in producing this disease, for in private practice it would seem to be rare, and yet Dr. Gusserow in the short period of four years had under his care five cases.

In the *British Medical Journal* of August 23, 1873, a case is reported illustrating how acute anæmia may be caused by fright. I will read the history as reported in that journal:

An interesting case presented itself at St. Bartholomew's Hospital in the person of a young woman, æt. 20, pallid, bleached, not menstruating, and with the typical aspect of an anæmic female. She stated that ten weeks previously she was in perfect health, had a good color, and menstruated regularly. At that time a fire had broken out in a house adjoining that in which she lived, and she had been exceedingly alarmed. Since then her menses had ceased and she had assumed her present appearance. There can be no doubt that anæmia is too frequently regarded and treated as the result of a constant blood-defect, the consequence of a chemically-altered circulating fluid. Such cases direct attention to a deeper and more significant pathogeny for some forms of anæmia,—an altered condition of the nervous system.

Here we have a case of anæmia produced by fright followed by recovery. In the cases which I have reported the anæmia came on years after the shock. Perhaps the more serious changes in the nervous system are the result of the continued agency of depressing emotions.

Since the above observations I have read several cases of pernicious anæmia following nervous shock.

Mackenzie, in an article on the subject in the *London Lancet* (March, 1879), in speaking of the causes, says, "Mental shock or emotion has been shown in several cases to be the starting-point of the disease. Thus, in a case related by Sir H. Marsh, a young lady accidentally poisoned her father by giving the wrong medicine. She was so overwhelmed by grief that she took to her bed, became anæmic, and died. In another instance a young man saw a child run over in the street. He was very much shocked at the occurrence, and never felt well from that date. He became progressively anæmic and weak until death, when nothing abnormal was found in his body except a bloodless condition of the viscera. In another case a young lad died of extreme anæmia in Guy's Hospital under Sir William Gull. He had never been well since he had been attacked by a sheep in a field."

22 South Eighteenth Street.

NOTES OF HOSPITAL PRACTICE.

NEW YORK HOSPITAL.

SERVICE OF GEORGE L. PEABODY, M.D.

DIAGNOSIS OF THORACIC DISEASE.

GENTLEMEN,—The hospital record states that this woman is 18 years of age. She has no malarial, rheumatic, or nephritic history. She entered the hospital two days ago. She began to menstruate when fourteen. In March, 1884, she was delivered of a child at the eighth month, the child living four days. Premature delivery was brought on by a fall downstairs. Four weeks ago she was delivered of a child at full term. Instruments were resorted to during delivery, resulting in a complete laceration of her perineum. After this she seems to have made a tardy recovery until three days ago, when she complained of having cold hands and feet and a hot head, pain in the right side, with slight cough and insignificant expectoration. She vomited once.

In calling your attention to this patient I wish to have you think of the serious diseases which may complicate one another, and which it is difficult to treat at the same time,—diseases which must be separated radically in our therapeutics.

This woman is very anæmic and weak. There is complete rupture of the perineum, which we must now entirely ignore because

of a complication which is at present of much more serious import. The history points to a lesion in the right pleural cavity, the exact nature of which it is difficult to tell. In addition to the history already given, I may say that the temperature on her admission was 103° F., the respiration 40 in the minute, and the pulse 128. During the first night here she was rendered fairly comfortable by the administration of a single grain of opium. She was put upon fluid diet, and given a disinfectant douche by vagina, to be repeated morning and night regularly. The day after admission the temperature had fallen to 100°, the respiration to 30, and the pulse to 120. But the pulse was of such a weak character that it seemed advisable to give a stimulant. From that time until this she has received an ounce of whiskey three times a day in milk. Her diet has been composed almost entirely of milk, but of that she takes an ample quantity (seventy-seven ounces daily) to keep her in very good condition indefinitely. Anæmia is very marked, and she has been given tonic doses of quinine, iron, and strychnine in pill form. In addition to that, she has had a cough-mixture containing a very small amount of morphia and a larger amount of cyanide of potassium. She is somewhat relieved of the cough, but still complains a great deal of pain in the right pleural cavity and of feeling very weak and restless. The pain in the right pleural cavity has been somewhat relieved by poultices.

As to the physical signs, you observe that distinct dulness begins to be apparent at the angle of the scapula, and lower down passes into flatness until we reach the lower border of the right lung. In the axillary region there is also dulness, gradually merging into flatness as we percuss downward. Auscultation over the dull area reveals respiratory and voice sounds rather high-pitched, but neither the respiration nor the voice sound is distinctly bronchial. This patient is one of a large class, therefore, in which the physical signs alone are not absolutely distinctive of the lesion present. There might be here a consolidation of lung-tissue, a croupous pneumonia with a copious exudation of fibrin such as to obscure the ordinary auscultatory signs of pneumonia. But against that supposition is the fact that the patient had no distinct chill, that the expectoration has not been distinctly pneumonic, and also that the temperature has been rather low for pneumonia, 103° being the maximum temperature, and this only temporary and probably caused in part by the excitement of conveyance to the hospital.

This is one of those cases in which nothing will decide positively whether there is pulmonary consolidation or exudation of fluid except the exploratory puncture; and I propose to resort to that procedure to-day in your presence, employing the hypodermic needle. The reason why exploratory puncture has not been resorted to before is that, whatever the condition found might be, the treatment would not have been altered in the least during the few days that she has been here, and the patient's weak condition has been such as to contra-indicate any unnecessary interference. But, as I have told you before, I have never seen any harm result from puncture with the disinfected needle, and so far as pain to the patient is concerned, this may be overcome by deadening the sensibility by the use of rhigolene, or in a less degree by the application of ice to the surface where it is proposed to insert the needle. Rhigolene is of great value where we resort to the large needle, which would cause considerable pain.

I proceed now to puncture posteriorly in the eighth intercostal space, and we find that the hypodermic needle brings away from the pleural cavity what seems to be a drop or two of serum stained with blood, but a microscopic examination will be necessary to determine positively its characteristics, and that shall be immediately attended to. The fact that we find no considerable quantity of fluid is not materially against the diagnosis of pleurisy, but it suggests that the exudation is of fibrin chiefly. In leaving the patient to-day, I wish to ask you to fix in your minds the facts that I have told you regarding her, and to observe her carefully from day to day as you visit the wards, and note the various steps in her progress. I present her to you as a case of pleurisy with ruptured perineum. After she recovers from her pleurisy I propose to get her into a good general condition, and then transfer her to the surgical wards for the relief of her surgical complication.

EXOPHTHALMIC GOITRE.

This woman, 55 years of age, a native of the United States, was admitted to the

hospital yesterday. Both of her parents died of consumption, and her mother also had rheumatism. Ten years ago the patient had inflammatory rheumatism, and shortly after the first attack she had a second, and since then has had rheumatic pains in the fingers and feet, especially in damp weather. The fingers are slightly enlarged. She has had repeated attacks of sore throat, has always had a cough. She gave birth to one child and had five miscarriages. Five years ago her feet swelled, and since then she has seen specks before the eyes, and there has been ringing in the ears and persistent frontal headache. There is no variation in the amount of the urine or frequency of its passage. The menstrual function had always been normal. The menopause occurred three years ago, since which there has been a leucorrhœal discharge. Three years ago she had an attack of inflammation of the bowels.

For ten years she has been becoming more nervous; has felt pulled down; has lost flesh and strength; has noticed that the heart beats perceptibly on slight exertion. She complains of shortness of breath on exercise, weakness of the eyes (which three years ago began to grow more prominent) and dimness of vision, and at that time the palpitation of the heart was more pronounced. Two years ago she noticed enlargement of the throat, first on the left side and then on the right. The swelling increased, the patient grew hoarse and more nervous, and the cough became more pronounced.

Gentlemen, you see this patient before you who has typical symptoms of rather an unusual disease in this country, and in whom the disease has developed at an unusual period of life. You know that I refer to exophthalmic goitre, Graves' disease, or Basedow's disease. The woman, who is 55 years of age, manifested the first symptoms of the disease three years ago, if we except certain indefinite and not characteristic nervous symptoms which were present earlier. The affection usually appears in women, rarely in men. In this patient the first symptom was with the heart. You may recollect that the three associated phenomena are,—first, a rapid and weak pulse; second, a prominence of the eyeballs; third, an increase in the size of the thyroid gland.

This woman gives none of the usually assigned causes of the trouble in the way of nervous or mental strain. It seems to have come on quite spontaneously. The symptoms are not such as to throw any light upon the cause of the disease, which you know is quite obscure. It has been supposed by some that the primary cause was in the state of the heart. You can see, without feeling this patient's pulse, that the heart's action is rapid by the movement of the tumor in the neck occasioned by the pulsation in the carotids. As I have said, it has been supposed that the rapidity of the heart's action gave rise to the increased size of the orbital structures and of the thyroid body. But we now know that such is not the case, because there are plenty of instances in which the heart is hypertrophied for years, causing increased rapidity of circulation and increased arterial tension, without there appearing any of the symptoms of Basedow's disease. Again, with regard to the enlargement of the thyroid gland, it has been stated that the cause of the lesion was a change in the sympathetic ganglia of the neck. But patients do not often die of exophthalmic goitre, and but limited opportunities have been given for making autopsies. In some of the few instances in which the sympathetic system has been examined disease has been found, while in others nothing abnormal has been found. It would seem that the disorder of the sympathetic nerve is not a simple one, but complex. In order to increase the rapidity of the heart's action it would be necessary to stimulate the sympathetic, whereas in order to dilate the blood-vessels of the orbits and thyroid it would be necessary to paralyze it. That the enlargement of the thyroid gland, affecting the sympathetic by pressure or by other means, cannot be the cause of all the other symptoms is evident from the fact that enlargement of this gland exists in many people in certain parts of Switzerland and elsewhere without the presence of the cardiac and orbital symptoms. Of course it is out of the question that the change in the orbit is the primary cause of the trouble, because the other symptoms are often present without any projection of the eye.

Commonly, the first symptomatic condition which appears is, as it was in this woman, palpitation of the heart. The patient may be treated for a long time for a cardiac neurosis without our being able

to say for weeks and months what is the nature of the neurosis, until finally the throat and orbital complication become manifest.

As to the possible termination of Graves' disease, ordinarily the patients get well. If they have serious trouble it usually results from some complication, and not from the lesions which this woman presents. If these lesions of themselves should terminate adversely, it would be by dilatation of the left ventricle and all the usual symptoms of cardiac failure,—local and general œdema, marked dyspnœa, etc. But that termination is unusual, and we do not anticipate it here. This patient will either get well or else reach a non-progressive stage of the disease, the symptoms remaining stationary for years, even to old age.

As to the increased rapidity of the heart's action and palpitation, we can do little in the way of direct treatment. Digitalis and convallaria produce but little effect in these cases, so little that we have practically discarded them. Iron of course can be given symptomatically for the anæmia, but it usually is of little benefit. Iodide of potassium has been strongly recommended, and a certain number of recoveries have been apparently traced to it. By far the greater number of cases have been benefited by treatment directed against the lesion in the sympathetic by the application of the constant electrical current to the sympathetic of the neck on both sides, employing from ten to twenty cells. A certain number of cases so treated have been reported cured. The presence of syphilitic infection in our patient may be inferred by you from certain facts in regard to her pregnancies and abortions; but no definite history of the disease has been obtained.

This woman has been put upon iodide of potassium, and if after a time she does not begin to improve the iodide will be stopped and electricity tried. She manifests in the face, as do many patients, anxiety and a nervous condition, and she complains of moral and mental troubles.

One of the physical signs which I neglected to mention was a murmur over the thyroid gland frequently present. In this case the loud sound proceeding from the carotids in the immediate neighborhood obscures the venous hum.

Before coming into the hospital the patient had used Fowler's solution. This remedy has been nearly entirely abandoned. It may be of benefit for the anæmic condition, but it has very little, if any, effect upon the graver manifestations of the disease.

PLEURISY WITH BLOODY EFFUSION.

Our third patient is an Italian, whose history is somewhat incomplete because of our want of familiarity with his language. He is 55 years of age, and was admitted a week ago, when he told us, as well as he was able, that he was in perfect health up to three weeks previously. His illness during the three weeks had consisted in pain in the left side of the chest, with a slight cough. On admission he was very pale, very anæmic, and he was suffering somewhat with dyspnœa. The temperature was 104.8°, the pulse 104, and the respirations 34. The physical signs were very similar to those of the first patient seen by you to-day. There was absolute flatness over the entire left side of the chest below, at the apex good resonance, and between the apex and angle of the scapula dulness, partial or complete, merging into flatness below. He had and still has exaggerated voice and respiratory sounds, with râles over the upper part of the lung. But in this case, the lesion being on the left side of the chest, we had another guide in the diagnosis which left no doubt that there was fluid in the pleural cavity. That was, in addition to flatness, total absence of voice and breathing, displacement of the heart. The heart is under the sternum, a little below the line of the nipple.

The pleural cavity was aspirated, and about fifty ounces of a fluid composed apparently of about sixty per cent. of blood was withdrawn. The operation gave the patient some relief: the respiration was less frequent, the fever diminished from 101° to 99°, and the man felt more comfortable. The tapping was repeated two days ago, twenty ounces of a similar fluid being withdrawn. Each time the withdrawal of the fluid was discontinued on the commencement of an obstinate cough.

As to the cause of this effusion I am quite in doubt. It may possibly be indicative of tubercular disease, but, so far as we can learn, the man has no tubercular history. It may be a hemorrhage from a

malignant tumor, which also may be in part cause of the dulness, or it may be due to rupture of small blood-vessels which had formed in adhesions, the result of a previously-existing pleurisy. You know that the blood-vessels which form in adhesions the result of pleuritic inflammation have thin walls, which are liable to rupture with the occurrence of renewed acute pleurisy. At all events, the patient has been benefited by the aspirations, and, inasmuch as the physical signs now show a reaccumulation of the fluid, I propose to repeat the operation before you. It must be remembered that in withdrawing this fluid, which contains a large proportion of blood, it is not as if we took that amount of blood directly from the circulation. The blood in his pleural cavity is a foreign body, and would not be likely to be reabsorbed.

You may remember that at my last lecture you were shown a young man who had had a hemorrhagic pleuritic effusion following pericarditis, which in turn had followed rheumatism. This effusion had been removed, as in this man, and the patient was last week able to be about the wards. He went out for two days, and had return of pleuritic pain and slight fever, from which, however, he has again recovered.

CHRONIC PLEURISY IN WHICH REPEATED ASPIRATION WAS FOLLOWED BY TUBERCULOSIS.

You may also remember the case of a young Italian whose chest was tapped in your presence a number of times, each operation withdrawing clear serum, the tapping being soon followed by a reaccumulation of the fluid. Besides being feverish, the patient was emaciated, and more recently cerebral symptoms—coma and optical changes—were present, and death ensued. There was no cough, no expectoration. From the general condition of the patient, tubercle was suspected, and an opportunity was afforded for examination of the fundi oculorum by the oculist, by whom no tubercles were found. At the autopsy we found general miliary tuberculosis, affecting both lungs, the peritoneum, liver, kidneys, and the brain. There was, however, no bronchitis and no dry pleurisy, so that the usual physical signs were absent.

PNEUMONIA.

Here is a man who had the usual physical and rational signs of croupous pneumonia, who has been making a rapid recovery with no other treatment than a liberal supply of food and a cough-mixture when the cough was most troublesome, and a little opium to quiet pain. For coexisting acute rheumatism of the ankle oil of wintergreen was given.

ANÆMIA.

You may remember two patients who were suffering from anæmia to whom we administered iron as a tonic, and to one, along with the iron, oxygen inhalations. They both improved, but the one who received oxygen along with the iron improved the more rapidly. Both patients, having recovered, have left the hospital.

CIRRHOSIS OF THE LIVER.

Before parting with you to-day, I wish to show you another patient whom you all remember. This man entered the hospital a few days ago, very cyanotic, weak, unable to take or retain any large amount of fluid food or any solid food at all. He had been constantly vomiting. He was deeply jaundiced, and his condition was very different from that which you see to-day. I do not show him to you to-day to illustrate the triumph of therapeutics, but to illustrate how a man in his condition will improve if removed from excitement and disturbing influences and his food regulated. He was then suffering from the usual symptoms, you remember, of advanced cirrhosis and from acute duodenitis and gastritis, both of which latter conditions have subsided. That the general anasarca is not so great as it was is due partly to persistent purging. We have not removed the cirrhosis; we have not materially altered the condition of the liver; but we have placed him in the way of recovery from two acute complicating affections, gastritis and duodenitis. I invite your attention to him that you may note the change in his condition from day to day.

TRANSLATIONS.

Results of Operative Treatment for Epithelioma.—Dr. C. Partsch, in a recent work entitled "Das Carcinom und seine operative Behandlung. Nach den in der königl. chirurg. Klinik zu Breslau gesammelten Erfahrung (1875–

1882)" (review, *Centralblatt für Chirurgie*), gives the results of his experience with epitheliomata in his surgical clinic, especially with the view of showing what changes in results treatment has accomplished in the last few years, since antiseptics have been used in their removal. His tables so far give the results of cases of carcinoma of the lip and external genitals operated upon between 1875 and 1882.

This work represents but a small portion of what the author has in contemplation: that is, the analysis of 570 cases of cancer of all parts of the body, operated upon between 1875 and 1882, and the condition of these patients at the end of March, 1884.

Cancer of the lip was observed in 98 cases; 88 were men, and 10 were women, more than the usual percentage of female cases. In only 2 cases did it occur in the upper lip.

The average age of these patients when they presented themselves at the clinic was 57.3 years, and most of them had suffered a year or longer; 22 patients had suffered but half a year. Half of the entire number had infected glands when they came under treatment.

The disease began in most cases between the 50th and 55th year, more seldom between 60 and 80, and only twice between 25 and 30 years.

Seventy-three per cent. of the men were exposed by their occupations to "wind and weather." Thiersch has also observed the disease to arise frequently under such circumstances.

Tobacco-smoking had but little influence in its production. In 12.2 per cent. of the cases it certainly arose from an injury to the lip. Many times the cancer was preceded by a suppurating wound. One patient had his lip wounded in the extraction of a tooth; this was immediately followed by a cancerous tumor, which had to be removed eight weeks later, but in spite of the early operation he soon succumbed to a return of the disease.

In some cases operation was refused, as the base of the mouth and the root of the tongue had become involved.

Four died soon after the operation; 8.3 per cent. later, from intercurrent diseases; and 32.2 per cent. from a return of the cancer. Metastasis into the internal organs was not observed. The first return generally occurred between one and two years. If this was removed, it generally returned again in a few months; a third operation was usually immediately followed by a reappearance of the cancer.

In March, 1884, 4 of these patients were living with a secondary cancer; death had occurred in 28 cases, in the average period of 17.1 months after the first operation. Some of these patients had had a second operation performed, and they died 13.6 months, on the average, after the last operation. The average duration of life after the first appearance of the cancer was 3.72 years.

There were living without any return of the disease 35.4 per cent.; 5 were still sick, as the removal had been followed by an extensive plastic operation. Six patients had remained free from disease between five and six years, and 8 patients were still without return, though from seven to nine years had elapsed since the operation. On the average, 29 per cent. of those operated upon had remained free from the disease more than three years, and 10.4 per cent. between one and two years. We only speak of a cure when three years have passed since the operation. In 4 cases the glandular involvement began only between two and two and a half years.

The prognosis in extirpation of the lip for cancer is moderately favorable, except where there is infiltration of the jaws or of the glands, especially so when a secondary operation is the one under consideration.

From the study of the clinical history of these cases the author finds that the period of lymphatic involvement depends more upon the character of the original growth than upon its duration.

The history in 4 other cases is worthy of mention. In 2 the disease invaded the lower jaw, filled the alveolar canal, and pressed upon the mental and alveolar nerves. The other 2 cases had remained free from disease for eight and ten years after operation before a new malignant growth appeared.

Cancer of the Penis was observed in 21 cases, nearly always between 40 and 60 years, once only between 20 and 30 years. Twice there was a congenital phimosis, and three times the disease was of traumatic origin.

Most of the growths sprang from the sulcus coronarius glandis, a few from the præputium. One case of direct infection from the prepuce to the contiguous head of the penis by a sort of vaccination is noted. Most of the cases presenting themselves were of long standing, and many of them had glandular involvement.

In one case a great thickening of the dorsal lymphatics could be readily perceived.

In some cases where there was decided glandular involvement a simple amputation of the penis without extirpating the glands sufficed for a cure; the glands decreased in size and did not afterwards become carcinomatous.

Amputation was performed as soon as the head of the penis became involved: the compression of the vessels was trusted during the operation to the fingers of an assistant; the hemorrhage from the corpora cavernosa was controlled by deep stitches after the mucous membrane of the urethra had been stitched to the skin.

Two patients died from the operation, one from blood-poisoning; 17.6 per cent. remained healed at the time of making the report. Some cases had a return of the disease after an immunity of from two and a half to three years. The secondary operations were usually unsuccessful. Nine cases in which the disease returned died, on an average, in 13.2 months, from inanition, hemorrhage, etc.

Carcinoma of the Vulva was observed in 9 cases, the average age being 47.1 years; one patient was only 27 years old. In 3 cases it had existed for one year; in one case a small nodule had been present for eight years. The disease appeared mostly on the inner side of the labia majora, and on the posterior commissure.

Two cases were past operative procedure; one patient operated upon is now free from disease for three years; two died from recurrence, and one from some intercurrent disease. The author warns against the use of iodoform in patients who use stimulants to excess.

Agraphia.—In one of his more recent lectures M. Charcot defines agraphia as "aphasia of the hand." It would be difficult to find a definition more concise or more expressive. Speech and writing have a close connection: they are, in fact, the two means by which man communicates most readily his thoughts. Both are acquired by study and are perfected by education. It is reasonable to infer that aphasia and agraphia are functional cerebral troubles of the same nature occurring in different locations. The disturbance of expression by writing has been to some extent neglected to make way for the investigation of the more prominent disturbance of loss of speech.

The word agraphia was introduced into science by Dr. W. Ogle in 1867, in a contribution to the St. George's Hospital Reports. M. Pitrès, in a recent article, after a study of the symptoms, concludes:

1. That direct analogies exist between the physiological mechanisms which preside over the formation of speech and of writing. Great resemblances exist also among the pathological disturbances which are able to cause interference with these functions.

2. We distinguish three forms of agraphia, corresponding with the three grades of aphasia: (*a*) agraphia (verbal blindness) in which the patient could not copy after a model, but could still write from his head or under dictation; (*b*) agraphia (word-deafness) in which the patient could not write after dictation, though he might show signs of intelligence or write after a model; (*c*) agraphia of the motive power, or *graphoplégie*, in which the patient could not write at all.

3. Each one of these forms of agraphia may be observed individually with patients whose intelligence is sound and whose power of motion is otherwise unimpaired. The existence of the agraphia of verbal blindness and of verbal deafness has been established by several very precise observations; lesions of agraphia of the motive power solely are more rare.

4. In the majority of pathological cases agraphia is associated with hemiplegia or aphasia. In these complex cases the different symptoms which are found united in the same patient may be considered as contemporaneous, and not as subordinate the one to the other. The complexity of the semeiology in each particular case depends entirely upon the variable topography and extent and greater or less gravity of the cerebral lesions. — *Revue de Médecine*, November, 1884.

PHILADELPHIA

MEDICAL TIMES.

PHILADELPHIA, APRIL 4, 1885.

EDITORIAL.

DISLOCATIONS OF THE TARSUS.

IN the last issue of this journal two cases of sub-astragaloid dislocation of the tarsus were reported, the chief point of interest being the great rarity of this form of injury. By a remarkable coincidence, the *Cincinnati Lancet and Clinic* issued upon the same date with the *Times* (March 21) contains a communication in which the clinical history of a case of identical nature is given by Dr. T. H. Stewart, of Bradford, in this State. In this account the writer also alludes to the unusual character of the dislocation, and states that he did not know but that he might be warranted in saying that his case was one without a parallel, and that most certainly it was as far as his own experience and examination of authorities went.

It was a case of compound dislocation of the tarsus in a man, in which the tibia, fibula, and astragalus were forced through the skin, the sole of the foot being turned almost upward. (The condition is that represented in the illustration on page 449, except that the foot was dislocated outward instead of inward.) The result, however, was quite different from the hospital cases, the surgeon succeeding in reducing the dislocation and in saving the foot, and, what is most remarkable, although the accident happened eighteen years ago, the patient regained and still preserves the use of the ankle-joint and walks without any lameness whatever. The case is the more interesting from the fact that the patient was Mr. Archer, who is the inventor of the "Archer Gynæcological and Dental Chair." The accident happened near the patient's home in the oil region, near Petroleum Centre, owing to a fall from a carriage.

Making due acknowledgment of the skill and judgment of the attendant, which deserve the highest praise, we would also call attention to several important practical lessons suggested by this group of cases. It must be admitted, however, that the hospital cases were not only of lower type of vitality, but that they also suffered with other lesions than the dislocation, to which the fatal results are fairly attributable.

DIPHTHERIA AND THE TREATMENT AS AFFECTED BY VIEWS AS TO ITS NON-SPECIFIC CHARACTER.

THE doctrine of the identity of croup and diphtheria, which has been held by many in England,—especially since the publication of the report of the Committee of the Royal Medical and Chirurgical Society,—has not been universally and unreservedly accepted either in Europe or in this country. Recently it has encountered very positive and determined opposition from no less an authority than Professor Virchow, who announced, at a meeting of the Berlin Medical Society, his unshaken adhesion to the views which he has long held of the pathological dissimilarity of the two diseases. The term croup, originally a clinical phrase applied to a prominent symptom of laryngeal affections, was by Rokitansky first used in a pathological sense and extended so as to include all visceral inflammations characterized by fibrinous exudation. Virchow claims in effect that there is a diphtheritic croup and a croup that is not diphtheritic. The former is known clinically as diphtheria, the latter simply as croup or pseudomembranous croup. He does not admit that all cases of fibrinous laryngitis and tracheitis are due to diphtherial poisoning, and he exhibited preparations in which there could not be found the slightest evi-

dence of diphtheria. Inasmuch as the invasion of the mucous membrane by the low organisms which accompany diphtherial poisoning invariably leads to destruction of the mucous membrane, which is not the case in croup, he believes that the recognition of this anatomical difference in the diagnosis between croup and diphtheria is of great practical importance in considering the question of prognosis after tracheotomy.

After a careful review of the arguments pro and con, especially with the light thrown upon the question by the studies of Wood and Formad, it would seem that the conclusion of the whole matter is that diphtheria possesses characteristics which entitle it to be considered as a distinct variety of morbid process, rather than those which would constitute it a distinct species of disease. In this sense diphtheria is not a specific disease, but a variety of fibrinous inflammation in which the tissues affected are so reduced in vitality that they are readily invaded by micrococci, which in turn may communicate the disease in different degrees of intensity according to the activity of the poison and the susceptibility of its host. As pointed out by Wood, therefore, all grades of malignancy may be discovered, and corresponding degrees of contagiousness, between simple croupous exudation and virulent cases of diphtheria.

As to the causation of this contagious variety of croupous inflammation, it appears that under certain circumstances (*e.g.*, exposure to exhalations from mixed animal and vegetable decaying matters) the poison is capable of being developed *de novo;* and that it is also directly communicable by direct inoculation as well as by contagion from person to person, or by means of fomites.

As it has been proved by many sad clinical illustrations that diphtheria may be conveyed by the breath of the patient, this would appear an all-sufficient argument for the diligent use of disinfectant and antiseptic applications to the false membrane by the brush, douche, or spray, with the view of destroying its infecting power.

In a brief but valuable communication to the *Practitioner* (January, 1885), Dr. C. J. Renshaw strongly recommends local treatment, and especially strong solutions of permanganate of potassium or of hypochlorous acid, for this purpose. By experimentation upon animals he believes that he has succeeded in demonstrating conclusively that a difference exists between diphtheria and membranous croup, and also between diphtheria and scarlatina.

Diphtheria, he maintains and supports by argument and experiment, is a disease of itself, of a highly dangerous character; it is contagious and arises from contagion, and also from the inhalation of emanations from mixed organic matter in a state of decomposition under certain circumstances, although there is little, if any, evidence to show that it is caused by sewage simply, or by animal or vegetable decomposition by themselves. Science has a great power over it, both as regards prevention and treatment, the principles of therapeutics being to sustain the strength of the patient by nourishment frequently given and to combat the development of the diphtheritic poison by every means in our power, among which stand pre-eminent the free use of stimulants and the local application of germicide agents to the affected surface.

The Index Medicus.—A communication has been issued by the editors, stating that Mr. George S. Davis, of Detroit, has undertaken to publish the *Index Medicus* on the same general plan as it has been hitherto. The first issue will contain the references to the literature of January, February, and March, after which it will appear monthly, as heretofore. It is to be hoped that the profession will sustain the editors and publishers in this great undertaking, the value and importance of which we need not dilate upon.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE relations of the heart as a muscle are not as well known as are those of its valvular apparatus. As a pump for lifting the blood out of the venous lacunæ and forcing it into the arterial system with its elastic walls, we know pretty well its functions; and not only that, but changes in the valves, with their consequences, are now familiar matters to us. We know what takes place when a valve is altered by disease; but do we always feel clear about what may have preceded the valvular lesion? We know that in a typical case of mitral stenosis the left ventricle is small and the arterial system is imperfectly filled. But when mitral stenosis is set up in a gouty heart the condition of affairs is widely different. Here there has been for long a well-filled artery and a large left ventricle; indeed, the blood-pressure within the arteries has been high, and the left ventricle has had considerable resistance to overcome on systole. It contracts with increased vigor by dint of its hypertrophy, and thus there is strain put upon the mitral valve-curtains, and this leads in time to valvulitis, which may take the direction of insufficiency or stenosis. If the latter, what occurs? There is an already-existing state of affairs upon which the new departure exercises but little effect. The murmur is localized and unmistakable, and the patient's wind is impaired. There is no moral doubt about the existence of a lesion, but there follows no transformation-scene. The hard arteries do not grow soft again. The hypertrophied left ventricle does not perceptibly waste. The pre-existing associations are there and cannot be obliterated. The valve-lesion appears on the scene not as the primary departure from a normal state of affairs, but as a later outcome of long pathological process, and as such it must be regarded.

It is all very well to lay down in text-books typical cases concluding with a post-mortem examination to verify the diagnosis, but this is not heart-disease as seen in life in very many instances. Where an acute endocardial storm has passed over the serous surfaces of the valves and lighted up a growth of connective-tissue corpuscles, whose subsequent contraction leads to distortion of the valve-curtains, then a primary injury is inflicted which carries with it a long train of consequences. Here we may fairly look upon the valvulitis as the *fons et origo malis*. Muscular changes follow, and the muscular chamber behind the lesion enlarges, while its wall thickens, either to arrest a back-flowing current or overcome some obstruction, as a narrowed orifice. How is this brought about? We are so accustomed to speak of compensatory hypertrophy that we run some risk of regarding the heart as possessing something like intelligence and acting rationally. Of course we do not mean anything of the kind. The heart is a pulsatile sac swinging in some exquisite nerve-balances, which enable it to accommodate itself to many circumstances. But fundamentally it is a pulsatile sac: when it is full a contraction follows; after this it fills again. The hollow muscle has got a presiding nerve-centre to rule it. A sensory nerve-fibril running over the inner surface records a sense of distention when the chamber is full, and an efferent message is sent out which causes the muscle to contract. If the sense of distention be acute, the resultant contraction will be energetic, just as we get palpitation on effort. This is the basal idea to grasp in attempting to consider the changes that go on in the heart-wall, about which much misconception exists. If half a dozen men were asked, Does the heart become dilated in systole or diastole? two of them at least will say "in systole." Yet how can a muscular fibril be stretched in the act of contraction? It must take place in diastole and be due to overdistention. If the muscular chamber do not empty itself completely on systole, a certain portion of blood is remaining in it when the in-coming current wells in. If the force of the in-coming current be normal, a certain hyperdistention of the chamber will result, and then one of two things occurs. If the sense of distention produce an energetic contraction, the sac will be emptied. If the contraction be insufficient for this end, a certain amount of blood remains over for the next systole, and so on until a condition of dilatation of the sac supervenes. The trophic nerves run with the motor nerve-fibrils. The efferent message which tells the muscle to contract is accompanied by another message, —viz., one for the arteries supplying the muscle to dilate and so carry a richer blood-supply to the muscle contracting energetically. The development of the blacksmith's arm and of the ballet-dancer's leg is thus brought about. The efferent motor message carries with it a means of enabling the muscle to keep up its energy, and the result of this is that the muscle enlarges or becomes hypertrophied. The primary departure is a condition of distention, and whether hypertrophy will be the result, or dilatation, or a blend of the two, is a matter of nutrition. When the heart-muscle is softened, as when there has been myocarditis along with endocarditis and pericarditis, even though the general condition be one of asthenia, the in-coming current is sufficient to produce dilatation of the left ventricle. (The energy of the in-coming current is influenced by some other force than that of the right ventricle, and is sufficient to overdistend the left ventricle, so that a condition of dilatation is set up.) And this will happen unless the demand upon the heart be reduced

to the minimum, and the ventricle encouraged to contract by some cardiac tonic and well fed with sustaining blood. Such is the practical lesson reflection upon the subject teaches us. In conditions of asthenia and insufficient nutrition the heart-wall will yield sometimes within a reasonable time. Some eighteen years ago such a case came under my notice in a hale, elderly woman, who sat up day and night nursing her husband, who died of acute phthisis. After the funeral she presented herself with a dilated heart and dropsy in her legs. She was compelled to take to her bed, and under rest (lessened demand) and appropriate measures (producing more vigorous ventricular contraction) her heart soon recovered itself, and she was once more a vigorous old woman, doing field-work for years afterwards. Here the ventricle yielded under excessive demand upon it. Indeed, insufficient sleep produces an asthenic condition of the heart-wall presenting the features familiar to us in fatty degeneration, and readily often assumed to be that structural change: only in time the heart recovers, which demonstrates that structural decay was not existent.

A very interesting relation of this matter is how far dilatation of the heart is linked with a high arterial tension. We know that hypertrophy of the heart is often set up by a state of high arterial tension without any valvular lesion, the increased obstruction to be overcome being the high blood-pressure in the arteries. If the ventricle can properly empty itself and its nutrition is maintained, then it undergoes hypertrophy. Such is the hypertrophy of the gouty heart,—in other words, the large ventricle of chronic Bright's disease.

We are all familiar with the tight artery, the large left ventricle, the loud aortic second sound, the large bulk of pale urine, of the complex heart and kidney changes where the blood is laden with excrementitious nitrogenized matter. There is increased arterial tension to be contended with, and the ventricle hypertrophies; but not always with simple hypertrophy. If the nutrition of the heart-muscle is good, there never is measurable dilatation. But when not perfect, then a certain yielding of the wall follows, and there is a blending of dilatation and hypertrophy as a result. Specially does this blend occur in women. And thus we see that while simple hypertrophy occurs with the tight artery in men, in women the tight artery is usually accompanied by a ventricle enlarged by hypertrophy and dilatation both. If we recognize that the initial condition or starting-point of hypertrophy and dilatation is distention and the result a question of nutrition, we experience no difficulty in understanding how we may have every possible proportion of hypertrophy and dilatation coexistent according to circumstances. If the distention be quickly developed, some dilatation is unavoidable. Yet the nutrition is equal to building up hypertrophy later on in the dilated wall, as constantly occurs after myocardial softening, where, though restoration of the chamber to its normal size is beyond the powers of the system, it still can build up hypertrophy in the dilated heart.

The longer a condition of dilatation has existed, the less probable is the return to the normal state; yet Fuller states that he has seen dilatation disappear after a four years' course of iron. Following out this line of thought, we can understand how dilatation may be of an acute character, and how it may disappear after a time under favorable circumstances.

Do altered conditions of arterial tension ever lead to acute dilatation of the heart? We know that the left ventricle is acutely distended in angina pectoris vaso-motoria. Does the ventricle ever yield in its inability to contract in the face of the increased obstruction to be overcome? We know it does when the attack is fatal, for the heart is found distended; the ventricle has become so overdistended as to be unable to contract in the face of high arterial tension to be overcome,—*i.e.*, if it is to contract at all. The heart has failed in diastole.

Are there cases where, in the face of a sustained high arterial tension with distinct attacks of angina vaso-motoria at intervals, the ventricle yields to the point of acute dilatation without being actually brought to a standstill? Such a case came under notice lately in the North of England. That there was dilatation in the left ventricle was a matter patent to a tyro. But what were the circumstances under which the dilatation had occurred or was brought about? That was the question to be solved. The case had been seen by competent medical men, who attributed the condition to changes in the coronary vessels. All readers of Niemeyer know what he says about the yielding and dilatation which goes on in an hypertrophied heart when the coronary vessels are no longer equal to the full nutrition of the big heart and tissue-decay sets in. It had been assumed that such was the morbid condition, and the gloomiest prognosis had been given. To my mind there was a rapidity of development which militated against this view and favored that of yielding of the wall before a high blood-pressure in the arteries. The question was, Could the case be accounted for without the coronary vessels being blocked? To my mind it could. Of course, if there was an atheromatous growth occluding partially one or both coronary arteries the outlet was as dark as it well could be. But in the ten months during which the condition of dilatation had been known to exist surely the occlusion would have been complete and the case run its course. Had this been the case? Then, again, if there was ossification of the

coronary arteries as the pathological departure, would there not be some hardening of the arteries elsewhere? of which there was no evidence. My experience in the Pathological Institute of Vienna taught me that such change in the coronary vessels was part of a general, wide-spread change. Certainly at times the change was most marked in the coronary vessels, but it was not confined to them. An atheromatous tubercle may occlude the mouth of a coronary artery, but it is of comparatively rapid growth. Where fatty degeneration of the heart occurs without general atheroma, it is due to occlusion of one of the coronary arteries by pressure upon it, as an adherent pericardium along its course.

Taking the case altogether, the hypothesis of coronary occlusion did not seem to me to fit in with the facts exactly. There were still imperfect attacks of angina; and if the heart-wall was decaying, one or other must surely have brought the heart to a stand-still. Whether or not the coronary circulation was impeded, the line of treatment to be taken seemed plain and clear. The patient was confined to his couch, and while there felt well; but any effort soon revealed the cardiac weakness. The other features of the case were a flatulent condition of the bowels, a coated tongue, sediment in the urine, and a duskiness of the features often found when there is a good deal of excrementitious matter in the blood. There was a condition of the liver present where, instead of the proteids brought to it by the portal vein being elaborated into the serum-albumen of the liquor sanguinis, they were being degraded into urates. (Such a condition of malnutrition with production of urates is common enough.) And this was the cause both of the impure blood and of the imperfect nutrition of the heart-wall.

It was clear that in order to relieve the ventricle the arterial tension must be kept as low as possible by depurating the blood. To clean the blood was not only to lessen the work of the heart, but to avoid attacks of angina, which were the cause of danger immediately threatening life. It was as important to lower the blood-pressure as to avoid making demands upon the heart by effort. Some mercurial with a purgative would sweep the waste matter out of the blood and lower the arterial tension. Some turpentine stupes would relieve the flatulence. A pill of strychnia, digitalis, and compound galbanum pills, which would strengthen the heart and give tone to the intestines, was indicated. Such was the immediate treatment which suggested itself. It may be said that Prunus Virginiana, Convallaria majalis, and digitalis had been previously tried, and each had done some good. But beyond such medicinal treatment lay a very important matter,—viz., the feeding of the weak ventricle. For such end it would be necessary to feed the patient on such albuminoids as the liver could deal with. It has been no uncommon experience with me in such cases, when the liver is out of gear and is breaking down the proteids into urates or bile-acids, to find a certain amount of loss of flesh, because the tissues are not fed properly. To reduce the amount of the albuminoid elements in the food so as to lessen the work of the liver has been one step; and when the inefficient liver has but little to do, it can do it well. Also to give the albuminoid matters in such form as experience has shown makes least waste-products,—namely, as fish and as farinaceous substances. By working on this line and clearing out the liver, and cleansing the blood by mercurial purgatives, such patients usually make headway; and such a regimen was recommended.

Whether such a combination of tactics will succeed or not remains to be seen. If the case should improve, it will be a species of lesson in cardiac therapeutics which will teach us much, and its progress will be carefully watched. The cases of break-down of the heart due to high blood-pressure in the arteries which have been recognized are few; but as our knowledge of the subject advances the recognition will become increasingly frequent, and then it will be possible to say what the prognosis of such cases is. Of course there will ever remain the disturbing factor of the condition of the coronary vessels, which cannot be ascertained positively, and which can only reveal itself in the subsequent results. But I venture to think that it is not necessary in all cases to assume that obstruction in the coronary circulation is the cause of the break-down of the heart-wall, carrying with it, as it does and must do, such a hopeless prognosis.

We know now what is the state of affairs in angina vaso-motoria, and we can see, as through a glass darkly, some effects of a sustained high blood-pressure in the arteries upon the heart-wall other than the hypertrophy with which of recent years we have become familiar. The whole subject is one of deep interest, not only from this point of view, but also from that of the causal relations of acute dilatation of the heart. This is undoubtedly produced in the left ventricle by effort at times, as well as in the right, which is an every-day affair; and rest is essential to the recovery of the heart-wall, which takes place in time, though, maybe, sometimes only after a considerable period has elapsed.

In another case, seen some years ago, acute dilatation of the left ventricle followed upon a cold bath, where contraction of the cutaneous arterioles suddenly raised the blood-pressure and persisted for a considerable time; yet it yielded at last to active measures, and carried its owner through an attack of hemiplegia, and held on well till he died of cancer of the liver. So there was not much to say against its repair. Acute dilatation of the left ven-

tricle and the circumstances under which it arises is a subject on which we now know enough to incite us to wish to know more.

J. Milner Fothergill, M.D.

CHICAGO.

THE third annual commencement exercises of the College of Physicians and Surgeons of this city took place at the Grand Opera-House on the afternoon of the 10th instant. At this college there were one hundred and seventy-one matriculants, sixty-nine of whom were candidates for diplomas. For a young school, this institution appears to be holding its own notwithstanding the sharp competition, and it is believed to be firm against the temptation—always present to a new school under such circumstances—of increasing its following by winking at questionable ways and means. In the evening, following the commencement exercises, a banquet was given at the Sherman House, the Cook County Commissioners being the honored guests of the faculty. This school has met with a serious loss in the retirement of Prof. R. L. Rea, the very able and popular teacher of anatomy and surgery.

Homœopathy flourishes here, and members of this ism, with few exceptions, thrive and wax fat. The two great schools of the system (?) have recently graduated large classes. The total number of graduates from all schools of medicine in this city will probably exceed that of last or any preceding year. Hard times appears to increase the number of aspirants for medical honors.

Dr. Murphy is a member of the medical staff of the County Hospital. Dr. Newman is also a member of the staff, representing homœopathy. A patient having a compound fracture of the leg was admitted to the service of Dr. Newman, who amputated the limb. Dr. Murphy criticised the operation as being unnecessary. This serious charge can hardly pass unnoticed, and will likely receive the attention of the Hospital Committee. It is an illustration of the foolishness of trying to mix oil with water.

Dr. Eggleston Burrows has resigned the position of one of the attending physicians at the Home of the Friendless, his medical adviser urging him to a change of climate.

Our Health Commissioner is making elaborate preparations for thoroughly cleansing the city, and promises that by May 15 he will have transformed Chicago from one of the least tidy to a position among the most cleanly cities.

M.

March 16, 1885.

Syncope and the Means of Averting it. —Dr. William J. Notley writes to the *Lancet* that in cases of syncope due to deficient cardiac action the application of heat to the head will prevent the access or revive the patient.

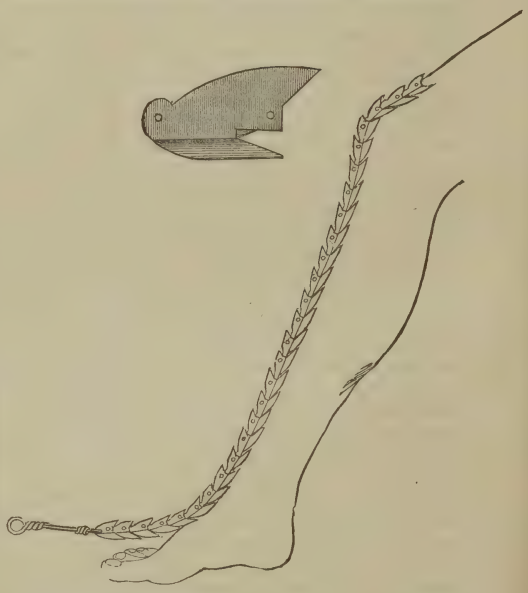
PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held January 7, 1885, the President, Dr. J. M. Da Costa, in the chair.

Dr. William Barton Hopkins exhibited an apparatus designed to facilitate the removal of fixed dressings.

It consists, as shown in the accompanying cut, of a vertebrated chain constructed of brass, and so formed that when it is placed upon a part prior to the application of a fixed dressing it will, on withdrawal as soon as the dressing has set, leave behind it in the latter a hollow longitudinal ridge. This may be readily divided by a few strokes of a rasp at any time it is desired to remove the dressing, and, a clean, straight cut being thus made, the splint will be in suitable condition to reapply if necessary. As applied to the part, the chain presents the form of an inverted T, and, although the upright portion stands half an inch high, it increases the circumference of the limb only one-eighth of an inch, and does not affect the proper tension of the dressing.



When a hinge in the splint is required, two chains are applied,—the ridge formed by the one in front being cut, while that behind makes the joint. If the chain has to travel over a very convexed curve, it should be wrapped in wax-paper, in order to bridge over the spaces between the widely-separated spines.

Dr. J. H. Musser presented for T. M. Livingstone, M.D., of Columbia, Pennsylvania,

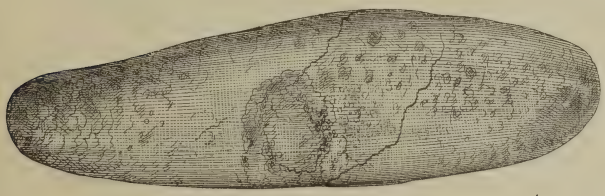
AN ENORMOUS GALL-STONE.

The stone was removed at the autopsy of a female, aged 66 years, who died of colloid cancer of the omentum. The carcinoma was recognized during life, but the presence of the gall-stone was not suspected. In addition to the malignant disease of the omentum, secondary growths were seen in the bile-ducts. One nodule completely occluded the common duct. The gall-bladder was firmly contracted around the stone, which is exhibited to-night, and a small fistula at the fundus communicated with its cavity and that of the peritoneum.

A full report of the case by Dr. Livingstone may be found in the Lancaster *Practitioner* for December, 1884.

The stone weighs 394 grains (or 25.6 grms.), and is three and one-third inches (or 8.5 cm.) long. The largest circumference measures 7.9 cm. The small end, corresponding to the cystic duct, measured 5 cm. in circumference; the large end, 7.1 cm.

It is elongated cylindrical in shape, tapered at each end. The end of the stone corresponding to the neck of the gall-bladder shows the greatest reduction in its circumference, as seen by the measurement, and evidently extended into the cystic duct, as one-half inch from the point it is slightly curved. In the middle of the stone an abrasion, so to speak (not due to handling), is seen, the size of a five-cent piece. It shows three or four laminæ of the stone. Both ends of the stone are rough, the body quite smooth. If possible, a section will be made to determine the character of the nucleus. The accompanying clear photograph, by Dr. G. A. Piersol, is presented to show the outline of the stone should sections be made. Dr. Livingstone sends the stone to be deposited in the Mütter Museum.



Natural size. Weight, 394 grs.

January 7, 1885.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, FEBRUARY 26, 1885.

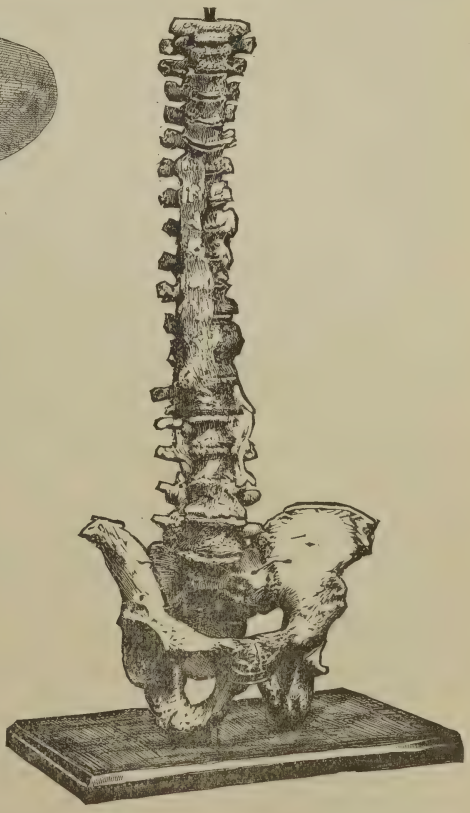
The President, Dr. SHAKESPEARE, in the chair.

Synostosis of the vertebral column. Presented by A. SYDNEY ROBERTS, M.D.

THIS specimen of synostosis or calcareous fusion of the dorsal and lumbar vertebræ was removed from the body of an aged man that had been sent from the Almshouse to the dissecting-room of the University of Pennsylvania. The pathological character of the specimen will alone be of interest, as all facts pertaining to a personal or clinical history of the individual were unobtainable.

The vertebræ, before my attention was directed to them, had been macerated and boiled, destroying thereby all evidence of the nature of the inflammatory process that caused such extensive synostosis.

In referring to the specimen, it will be noticed that the vertebral column is held in a rigid position by a deposit of calcareous plastic material that extends from the fifth dorsal to the sacrum. In the dorsal region, to the right of the anterior common ligament, a broad ribbon-like band of the deposit covers the bodies of the lower seven vertebræ. The same fusion exists to the left of the median line, between the seventh and ninth dorsal. It is here interrupted by an intervertebral interspace, to again appear between the eleventh and twelfth dorsal and the first and second lumbar. The smooth, plastic character



of the effusion is materially altered in the lumbar region, especially noticeable between the bodies of the first, second, and third. It is here thickened and nodular, with occasional

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bony stalactites, markedly contrasting with the smooth, ribbon-like band of the mid-dorsal.

The vertebral laminæ frequently coalesce, especially noticeable between the fourth and fifth lumbar and in the lower dorsal region. The cretaceous deposit has occurred in the structure of the intrinsic ligaments of the spine, or those short, firm bands that bind the approximating surfaces of the vertebræ together. Between the fourth and fifth lumbar and the attachment of the latter to the sacrum the ligamentous structures are all involved by the deposit, firmly cementing the superincumbent column to the sacrum.

The articulating facets of the vertebræ, with but few exceptions, show evidences of chalky deposit (their margins are nodular and "frilled"). Between the tenth, eleventh, and twelfth dorsal the articulating facets are obliterated by anchylosis. The same fusion exists between the facets of all the lumbar vertebræ. The extremities of the lower dorsal spinous processes and the last two laminæ are united by ossification of the supra-spinous ligament.

Corresponding with this anomalous condition of the vertebral column and its articulating facets, a similar process may be noted to have occurred at the sacro-iliac juncture. The margins of the articulating plane are here encrusted by calcareous nodules. About the margins of the articulating surfaces for the heads and tubercles of the ribs, the same chalky concretions have been deposited.

With the view of determining the nature of these plastic effusions, and in lieu of the evidence that would have established the etiology of the affection had a careful autopsy been held, I examined portions of the deposit with the nitric acid and ammonia test, with the hope of detecting the presence of uric acid. The results were negative. A crystalline structure could not be detected by microscopical examination. The mass appeared amorphous, yielding bubbles by the addition of acetic acid. It was no doubt largely composed of the carbonate and other salts of lime.

I think it may be inferred that the individual from whom these vertebræ were removed had been afflicted with chronic rheumatic arthritis, as the specimen at least shows the characteristic deposits of the disease.

A *case of cyst of the broad ligament* was presented by Dr. C. M. Wilson.

Spondylitis of the dorsal vertebræ with miliary tuberculosis of the lungs. Presented by A. Sydney Roberts, M.D., for Dr. William G. Porter.

Frederick H., a gunsmith, æt. 23, a native of Berne, Switzerland, was admitted into the surgical wards of the Philadelphia Hospital, under the care of my colleague, Dr. Porter, on January 9, 1885. He complained of general malaise, great prostration after slight exertion, and a sharp paroxysmal pain over region of sternum and about the right shoulder-blade. He had always enjoyed excellent health. His parents were living and healthy. He was a moderate drinker, and without any venereal taint.

During the latter part of August, 1884, five months before admission to the hospital, he commenced losing flesh without apparent cause. The symptom of pain soon followed, located over the ensiform appendix, and a month later he was incapacitated from work by extreme weakness. Upon date of entry a marked angular-kyphos was noticed in the mid-dorsal region of the spine. Pain was now constant in anterior portion of chest and greatly exaggerated by motion. Vertebral column was rigid, normal curves obliterated by spasm of erector-spinæ muscles.

One week after admission an elastic swelling appeared below the inferior angle of the right scapula; rapidly losing its circumscribed character, it spread in all directions. A month later it covered the entire posterior half of the trunk, from the spine of the scapula to the belly of the quadratus lumborum, its anterior margin being defined by a perpendicular line corresponding to the pectoral fold of the axilla.

I first saw the patient February 13 (one week prior to his death). He had a rapid, small pulse, shallow respiration, dry, parched skin, and a temperature of 101°. The abscess had so covered the hump that it could only be detected by deep pressure. He grew rapidly weaker. Morning temperature ranged between 99° and 100°, with an evening rise to 100°, 101°, and 102°; it did not vary from this range until two days before death; it then fell to normal (98°) and remained there. He died on February 20, 1885.

Dr. Shakespeare has presented the following report of the post-mortem:

Autopsy.—A large fluctuating abscess was noticed externally, covering the posterior portion of the trunk, extending along the spinal column from the third cervical vertebra to the first lumbar; skin covering area of distention discolored and mottled. Upon cutting into sac of abscess about one gallon of greenish, stinking, semi-purulent fluid escaped. Dorsal muscles in region of hump dissected away by the burrowing of pus, and in the main destroyed. The scapula had likewise been separated from the trunk by the sac of abscess pushing under its inferior angle.

Destruction of tissue marked on right side of column. The spinous processes of the dorsal vertebræ were freely movable at apex of kyphos in all directions.

Thorax, from within showed firm pleuritic adhesions in each cavity, more extensive on right side. Lobes firmly bound together;

one or two small normal areas at apex of upper lobes; lung-tissue mainly crepitant throughout; cut surface exhibits cavities in upper lobe; the remainder of lung-tissue of each lobe studded with gray tubercle. Left lung is in a similar condition, with extensive congestion. Bronchial glands not enlarged. Heart and pericardium normal. Liver small, color red, appearance of cut surface normal; numerous diaphragmatic adhesions; capsule thickened irregularly. Gall-bladder normal. Spleen flabby; numerous adhesions to diaphragm, with evidence of peritonitis; dark maroon in color, slightly mottled; pulp soft, size normal. Kidneys slightly enlarged; capsule readily stripped, leaving a pinkish-gray surface, with some injection of vessels between the pyramids of Ferrein; cut surface shows cortex thicker than normal; medullary portion pink in color.

Vertebral Column.—The sac of the abscess within the thorax occupied the region of the mediastinum. It covered the bodies of all the vertebræ from the second to tenth dorsal. The anterior common ligament was destroyed and the vertebræ were eroded; caries had also eaten away the greater portion of the bodies of the seventh and eighth dorsal. The heads of the ribs articulating upon these vertebræ were loose in the sac of the abscess.

PHILADELPHIA CLINICAL SOCIETY.

STATED MEETING, FEBRUARY 27, 1885.

The President, EDWARD E. MONTGOMERY, M.D., in the chair.

DR. MONTGOMERY reported several cases of

ABDOMINAL SURGERY.

Cases 1, 3, 4 were done under antiseptic precautions, 6 and 7 without. He objected to the spray, on the ground that it increases the peril of the patient by the prolonged chilling of the peritoneum, by absorption of a deleterious agent, and by the increased organic matter washed into the wound from the impure air of the room.

RETINITIS ALBUMINURICA.

Dr. L. BREWER HALL presented the following case.

Mrs. S. applied to the Philadelphia Dispensary, February 17, 1885, seeking relief for a rapidly-increasing loss of vision. She had always had excellent health, has given birth to five children, and is now pregnant for the sixth time. Thinks she is now in the eighth month. At present she feels perfectly well, complaining only that her eyesight has failed rapidly during the past few weeks. Had no aches nor pains anywhere; appetite good. Her vision upon entering the Dispensary was R. $= \frac{1}{60}$, L. $= \frac{2}{60}$. Read Jaeger with difficulty. The exterior of the eye appeared perfectly healthy. The ophthalmoscope, however, revealed the existence of retinitis, and that peculiar form characteristic of kidney-disease, *retinitis albuminurica*. The urine, upon examination on the 18th instant, showed a moderate amount of albumen (one-fifth to one-sixth bulk), with a few large granular tube-casts mingled with much squamous epithelium, confirming the diagnosis made upon the appearances in the eye.

Dr. MONTGOMERY questioned the importance of the induction of premature labor.

Dr. HALL, in reply, said, "That would depend on the amount of inflammation and the stage of the pregnancy. This deposit of fat in the retina is generally absorbed rapidly. Exudation of lymph into the retina

No. of Patient.	Age. Years.	Disease.	Operation.	Hospital or Private Practice.	Date.	Result.	Remarks.
1	28	Ovarian tumor. Left ovary.	Ovariotomy.	Hospital.	May 17, 1879.	Recovery.	Right ovary contained two small cysts. Since been pregnant.
2	35	Cancer of uterus and rectum.	Colotomy.	Hospital.	April 28, 1880.	Recovery.	Survived one year. Was able to attend to herself and had no discomfort.
3*	53	Multiple fibroid.	Hysterectomy.	Hospital.	May 5, 1880.	Death.	Fifty-three hours. Peritonitis and exhaustion. Tumor weighed 12 pounds, partly calcified. Aorta atheromatous.
4*	46	Fibroid.	Hysterectomy.	Hospital.	March 17, 1882.	Death.	Shock, 2½ hours. Ureters dilated, kidneys sacculated. Tumor weighed 13 pounds.
5	46	Epithelioma of larynx and œsophagus.	Gastrostomy.	Private practice.	Dec. 17, 1882.	Death.	On fourth day beginning of peritonitis. Had been supported three weeks on injections.
6	17	Menstrual epilepsy.	Oöphorectomy.	Hospital.	Sept. 13, 1884.	Recovery.	Convulsions less severe. An interval of three months between epileptic attacks.
7	30	Cyst of broad ligament.	Laparotomy.	Private practice.	Oct. 9, 1884.	Recovery.	Cyst was enucleated, and the right ovary removed.

* Colored.

near the disk is not so rapidly taken up. If the disk is being choked rapidly, the induction of premature labor should be considered. In this case the patches are diminishing, and the inflammation seems to be subsiding, so there is no indication to induce premature labor."

(March 1 the patient was delivered of a stillborn fœtus, and there was a marked improvement in her eyesight immediately.)

MARY WILLITS, M.D.,
Reporting Secretary.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held February 25, 1885, JOHN A. WYETH, M.D., President, in the chair.

Dr. JACOBI presented in behalf of a candidate a specimen of round-celled sarcoma of the mesentery, with secondary involvement of the kidney, removed from the body of a girl six years of age.

OLD GUNSHOT-WOUND OF THE CHEST.

Dr. PAGE presented a man who was wounded in the left shoulder during the civil war, the ball passing in a direction from behind forward and downward. The ball became lodged, but where was unknown. There were no pulmonary symptoms until comparatively recently, when the patient suddenly spat up a quantity of blood and suffered at times from an irritating cough. Careful physical examination revealed the signs of a local pulmonary inflammation situated a little to one side of the median line and about four inches below the clavicle, and believed to be due to the bullet, which had probably become recently displaced from the capsule by which it had been surrounded. Dr. Page quoted a few other cases in which a bullet remained in the lung without exciting pulmonary symptoms for a number of years.

Dr. SHRADY, in reply to a question by the President, said that most or all cases of uncomplicated penetrating wound of the chest which he saw during the war recovered. If clothing were carried in with the bullet the chances were less favorable.

The PRESIDENT knew of no case of penetrating wound of the chest with fracture of the rib to recover.

PRIMARY CARCINOMA OF THE BLADDER.

Dr. PORTER presented a specimen of supposed primary carcinoma of the bladder, with secondary involvement of the ureter and kidney, removed from the body of a man who had been operated upon for stricture of the urethra, and later had passed urine containing pus.

PYELONEPHROSIS.

Dr. PORTER also presented a part of the genito-urinary tract removed from the body of a woman who had suffered from symptoms of cystitis, later of intermittent fever, and, finally, of peritonitis. The urine contained a large quantity of albumen and a variety of casts. The patient died within a few hours after admission to the hospital. The lesions at autopsy illustrated local pelvic peritonitis and pyelonephrosis.

SUPPURATING GANGRENOUS ORCHITIS.

Dr. PORTER also presented another series of specimens illustrating disease of the genito-urinary organs. Before admission to the hospital the patient had been catheterized, being a sufferer from an enlarged prostate. Shortly after the catheterization his symptoms grew worse, and he died with sloughing epididymitis and orchitis.

HYDROCEPHALUS IN THE ADULT.

Dr. T. M. PRUDDEN exhibited the brain of an Italian, who five weeks before admission to the hospital began to suffer from headache, which after a time was accompanied by stupor, alternating with delirium; finally, coma and death. There had been a well-marked alcoholic history. At the autopsy nothing apparently abnormal in the brain, excepting dilatation of the lateral ventricles, which contained from four to six ounces of fluid. Cases of dilatation of the ventricles it was known did sometimes occur in adults without evident cause, and he believed that a positive diagnosis could not usually be based upon the clinical symptoms. In the present case it was thought the patient was suffering from a cerebral tumor, probably pressing upon the cerebellum, but the diagnosis was not confirmed at the autopsy. There was well-marked broncho-pneumonia.

In connection with this case Dr. Prudden also presented the brains of two hydrocephalic children,—in the first death taking place at the twenty-eighth day of age, and there being also a spina bifida. In that instance the central cerebral cavity occupied about half of the entire cranial vault. In the second the child died at the ninth year, and the enlargement of the cranium had been more gradual.

Dr. Prudden referred to the importance of removing the hydrocephalic brain under water, the ventricles distended with fluid, and hardening in the form which existed during life.

Dr. JACOBI had seen but a single case of congenital cranio-tabes. As a rule, it did not appear until the child was three or four years old.

Dr. W. P. NORTHRUP had seen only the present case of congenital cranio-tabes.

CANCER DUE TO THE LONG-CONTINUED IRRITATION OF AN ULCER.

Dr. GEORGE F. SHRADY presented a specimen which illustrated a question raised at the last meeting, that of malignant disease being caused by long-continued irritation. In the present case the man had some years ago sustained a burn on the face, neck, and chest,

all of the wounds healing with the exception of two small ones on the chest, which finally took on malignant character. Only one side of the ulcerating surface exhibited malignant structure under the microscope.

HYDROSALPINX AND UTERINE FIBROIDS.

Dr. H. J. BOLDT presented the specimens, which were removed after the patient's death. She had suffered from uterine symptoms believed to be due to a polypus which was removed, and subsequently, when an examination was being made for diagnostic purposes, the patient died of chloroform-anæsthesia. There had been no apparent heart-lesion, but the autopsy showed a certain amount of fatty degeneration, particularly in the left ventricle. Dr. Boldt had been in the habit of giving chloroform for diagnostic purposes, but he would not do so any more.

Dr. NORTHRUP said some physicians who were acquainted with the dangers of chloroform made a custom of commencing anæsthesia with chloroform and continuing with ether. He asked if this was not as dangerous as to continue the use of chloroform throughout.

The PRESIDENT thought it was better to give chloroform alone than afterwards to substitute ether. On two occasions, some years ago, he tried one of the mixtures which were then being used for anæsthetic purposes, and in both instances the patients came nearly dying. The use of chloroform as a general anæsthetic should be condemned most severely, except perhaps in children under twelve years of age.

Dr. PORTER said Dr. Lusk had written a paper calling attention to the dangers of chloroform even in labor.

The PRESIDENT had heard of a case of death from chloroform-anæsthetization during labor.

OVARIAN CYST.

Dr. H. MARION SIMS presented a cyst of the ovary, removed recently for severe pelvic symptoms, the patient making a perfect recovery and being entirely relieved of pain.

Dr. Sims also presented a similar specimen removed from another patient, with like results.

CARCINOMA OF THE OVARY.

Dr. NORTHRUP presented a specimen of carcinoma of the ovary, the chief interest of which consisted in the peculiar gross appearance of the mass.

SPINDLE-CELLED SARCOMA OF THE BRAIN.

Dr. FRANK FERGUSON presented a very large tumor of the brain in a man about 30 years of age, a German, and a sailor by occupation. Two years previous to his death he was said to have been taken suddenly with paralysis of the right side. He only partially recovered. A few weeks before death he had severe headache, with pain in the right parietal region. Shortly before admission to the hospital he became suddenly unconscious. The temperature just before death was 105°. At the autopsy a spindle-celled sarcoma, weighing four and a half ounces, measuring nine inches in its greatest circumference and three in its smallest, was found in the left parietal region, apparently having its origin in the dura mater. The ganglia at the base of the brain on that side were destroyed to a considerable extent.

SARCOMA OF THE SPINAL CORD.

Dr. FERGUSON also presented a portion of the spinal cord to which a tumor about the size of an almond was attached, cystic, containing the microscopical structure of spindle-celled sarcoma, and apparently developed from the pia mater, giving rise to the symptoms of myelitis with ascending and descending degeneration. The cord had not yet been examined under the microscope.

STATED MEETING, MARCH 11, 1885.

The President, JOHN A. WYETH, M.D., in the chair.

DEATH FROM SUPPURATIVE INFLAMMATION OF THE TUNICA VAGINALIS TESTIS, FOLLOWING REPEATED TAPPING FOR HYDROCELE.

DR. T. M. PRUDDEN presented the specimens, together with microscopical sections, obtained from the case of a man who had carried a hydrocele for fifteen years. A week before his admission into Bellevue Hospital the hydrocele sac had been tapped, and it was also probably injected. After admission the sac was tapped several times with the hypodermic needle, clear serum being withdrawn. The temperature rose, finally typhoidal symptoms developed, the tunica vaginalis underwent gangrenous inflammation, and the patient died.

A microscopic examination of the walls of the sac and of contained pus was made. The pus contained immense numbers of two kinds of bacteria, — namely, the staphylococcus pyogenes and the streplococcus pyogenes. They were also present in the purulent pellicle which lined the distended sac.

The PRESIDENT, in reply to a question raised by Dr. John C. Peters, remarked that a mechanical introduction of cocci was not necessary for their development in abscess. They were present in deep-seated abscesses which had no apparent external communication. He further said that several cases were on record in which death had followed tapping of a simple hydrocele with the hypodermic needle.

HYPERPLASTIC ENLARGEMENT OF THE OVARIES.

Dr. H. C. COE presented a number of ova-

ries removed from different patients, the seat of hyperplastic enlargement, and which, nevertheless, were capable apparently of functionating. He inferred that in a number of instances the diagnosis of useless ovaries was made by the operator rather than by the pathologist. These enlarged ovaries had very much the appearance of so-called fibroid tumors of the ovary, and he had found it difficult to distinguish between them by a microscopic examination. Dr. Coe had sometimes entertained the idea, although he said it might be a fanciful one, that the pain which some patients experienced at menstruation was due to interference with easy rupture of the follicle from thickening of the capsule.

Dr. RIPLEY asked a question with a view to learning whether this change in the ovary could take place without dysmenorrhœa being present.

Dr. COE said that in a number of autopsies enlargement of the ovaries had been found, there having been no history of dysmenorrhœa during life. In reply to a question by Dr. Boldt, he said that enlargement of the ovary was likely to be accompanied by prolapse of the organ unless it had become previously adherent by inflammation.

Dr. W. P. NORTHRUP asked if it was considered that menstruation and ovulation were contemporaneous.

Dr. COE thought it was fair to suppose there was some connection between the two processes. Theoretically, he might say that in health the follicle ruptured prior to menstruation, whereas in disease it did so later.

The PRESIDENT thought a death-blow to the argument was to be found in the fact that menstruation sometimes occurs after removal of the ovaries. At the meeting of the Medical Society of the State of Georgia two eminent gynæcologists referred to two cases in which the women conceived after removal of the ovaries.

AMPUTATION OF THE HAND FOR INJURY.

Dr. VAN GIESON presented the hand of a patient which had been removed at the St. Catherine's Hospital for inflammation and destruction of bones following an injury due to the striking of a paint-pot upon the metacarpus. The head of the radius and two of the metacarpals had been destroyed by the necrotic process. It was evident from the appearance of the specimen that resection would not have been proper.

SARCOMA OF THE LUNG.

Dr. VAN GIESON presented the lungs of a man who died in St. Catherine's Hospital, having given signs which led his family physician to a diagnosis of tuberculosis, with enlargement of glands of the neck, and later of the axillary glands. Dulness was universal over the right lung, less marked over the left. There was marked prominence of the middle of the sternum. The patient emaciated, and died of exhaustion ten days after admission. At the post-mortem the lung was found to be sarcomatous, as seen in the specimens. The spleen, the kidney, and the mesenteries were the seat of secondary nodules.

CARCINOMA OF THE PERITONEUM.

Dr. VAN GIESON also exhibited a specimen of carcinoma, with partial colloid degeneration, of the peritoneum, removed from the body of a man who died at 50. The patient had the great toe amputated previously in Bellevue Hospital, by Dr. Markoe, for what was believed to be semi-malignant disease. Notwithstanding this fact, the symptoms and physical signs seemed to justify the diagnosis of leucocythæmia which was made. There was an immense abdominal tumor, commencing in the region of the spleen, extending across the abdomen and downward to near the supra-pubic region, smooth on the surface, and which could be lifted under the integument. The patient was very anæmic, and under the microscope the blood seemed to present an excess of the white corpuscles. The patient had no pain, no nausea. The appetite remained good. The autopsy, however, showed that the diagnosis was entirely erroneous. The disease was extensive malignant degeneration of the peritoneum, the parietal and visceral layers being involved. A portion of the process was colloid. Dr. Van Gieson said that his diagnosis had been based upon the fact that in a number of cases of carcinoma of the peritoneum which he had seen there had been pain, nausea, loss of appetite, emaciation, none of which were present in this case.

He asked Dr. Prudden if so-called colloid cancer of the peritoneum was initially carcinoma, the gelatinous appearance developing later.

Dr. PRUDDEN said this question was not settled in the minds of all pathologists. He thought that in some cases the disease was in the beginning colloid, while in others it began as carcinoma and took on colloid appearances later.

Dr. AMIDON raised the question as to whether in carcinoma of the peritoneum pain did not have some relation to the presence or absence of involvement of the parietal layer of the peritoneum.

Dr. COE said, with regard to the appearance of the blood in leucocythæmia, that in the few cases in which he had made a microscopical examination it was evident at once that leucocythæmia was present.

COLLOID DEGENERATION OF THE OVARY, WITH UTERINE FIBROID.

Dr. JOHN C. PETERS related the history of a negress, about 70 years of age, who had been taking quinine and various medicines for supposed malaria. He first saw her three months prior to death, when there was ascites and some form of pelvic enlargement, uterine

fibroid and cancer having entered into the question of diagnosis. At the autopsy, made by Dr. Frank Ferguson, a fibroid tumor about the size of the fist was found in the body of the uterus, while the right ovary was the seat of colloid degeneration, with secondary nodules in the peritoneum.

GENERAL MILIARY TUBERCULOSIS.

Dr. VAN SANTVOORD presented the lungs of an infant which died at the ninth month of age, general miliary tuberculosis being found at the autopsy. The interest of the specimen was the great extent to which the lungs were involved in the disease in a child so young.

CIRRHOSIS OF THE LIVER AND KIDNEYS.

Dr. W. P. NORTHRUP presented specimens removed from the body of a woman who died at 62 years of age, having been a total abstainer from alcoholic liquors and having been in good general condition. There was a history of Bright's disease a year ago, and at one time the urine contained some sugar. The autopsy revealed great diminution in the size of the liver and kidneys due to cirrhotic process.

Dr. RIPLEY remarked that cirrhosis of the liver might occur without there having been abuse of food or drink and without a syphilitic history. He also remarked that the liver might vary in weight in adults from one pound to five or six pounds without being the seat of disease, and that the organ diminished in size after the fiftieth or sixtieth year.

Dr. FRANK FERGUSON presented sections of the sarcoma of the brain shown at the last meeting, under the microscope, and said that the Microscopical Committee had found the ulcer of the epiglottis and the disease of the metacarpus, presented at a former meeting by Dr. Van Santvoord, to be tubercular.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MARCH 5, 1885.

The President, B. F. BAER, M.D., in the chair.

DR. WILLIAM GOODELL read a paper entitled

A YEAR'S WORK IN LAPAROTOMY.

During the past year he had had thirty-two laparotomies. Of these, twenty-two were ovariotomies, eight öophorectomies, one hysterectomy, and one exploratory incision.

Of the twenty-two ovariotomies, ten were performed in the hospital of the University of Pennsylvania, with three deaths; seven at his private hospital, with one death. In eleven both ovaries were removed. Seventeen had adhesions, which in seven were very formidable. Four of the women were over sixty years of age, and of these one died. In not a single instance did he refuse to operate, although three of his patients were very ill at the time of the operation.

The causes of death were as follows: An old lady, aged 63, from whom a tumor weighing sixty-five pounds was removed at the hospital of the University, died suddenly from acute uræmia after doing well for three days. One kidney was found riddled with abscesses, the other was contracted. The second death also occurred at the same hospital, but from peritonitis caused probably by hospitalism. The third and fourth fatal cases were in advanced stages of septicæmia when operated on. Each one had high temperature, frequent pulse, and night-sweats from suppurating cyst. In addition, one was bedridden and had bed-sores. The other had greatly swollen legs, although the tumor was a small one. In each the adhesions were universal and very formidable. The former died from shock fifteen minutes after the operation; the latter lived one week. This was a dermoid cyst, which, in his experience, was liable to have extensive and firm attachments, making removal often difficult and dangerous. Dermoid cysts also are very vulnerable, taking on inflammation on the slightest provocation. In this instance a physician had removed some of the fluid with a hypodermic needle. He (Dr. G.) had had two cases of small cyst in Douglas's pouch in which violent inflammation followed the use of the aspirator. The lives of his patients were for several days in danger, but fortunately they recovered with obliteration of the sac. This should render one cautious about touching a dermoid cyst unless he is prepared to perform the radical operation.

The fifth death occurred in a case forlorn from the outset. Five years ago Dr. Goodell had removed a very large colloid cyst of the left ovary from this woman. A year ago her health began to fail coincidentally with the appearance of another abdominal tumor, and she was rapidly pulled down. On opening the abdomen, Dr. Goodell found that the cyst had burst some time before and that a colloid material had escaped in large quantities into the peritoneal cavity. The degeneration was plainly malignant, as the womb, broad ligament, bladder, and the parietal peritoneum were studded with papillomatous masses. He did not see her again, but her physician, Dr. Bauman, of Telford, wrote that the wound healed perfectly. No special symptoms set in, yet the woman grew weaker and weaker, dying from exhaustion on the sixteenth day after the operation.

The lecturer stated that this was the only case in which he had twice performed ovariotomy upon the same patient; but that he had at present a lady under treatment from

whom four years ago he had removed the left ovary for cystic degeneration, and in whom the right ovary is now enlarging and will need extirpation before long. The liability of the sound ovary becoming diseased amounted in his cases to 1.5 per cent., and this strengthened him in the conviction that in women approaching the climacteric both ovaries should, as a rule with but few exceptions, be removed. The above case made his third one of colloid degeneration in which the sac had burst some time before the operation. In each the disease was evidently malignant. One survived the operation and went home, but died a few weeks later from a reaccumulation of colloid in the abdominal cavity and a sprouting out of a crop of papillomata from the cicatrix in the abdominal wall. In the second one both ovaries were removed, and from great emaciation and weakness the woman became plump and strong. She did well for two years, when a tumor made its appearance in the left broad ligament. A year later she died, after much suffering. From this experience he would look upon colloid cyst with suspicion, and would give a guarded prognosis in respect to ultimate recovery.

With regard to the causation of ovarian cysts, he believed more and more that single life, sterility, and unfruitfulness, whether natural or enforced, were important factors. Thus, out of his twenty-two cases, nine were not married and one was a widow. Again, of the married, one was sterile, one had borne but one child, and three had had only two children.

During the past year he had also performed eight öophorectomies. Three of these operations were demanded for excessive menorrhagia and dysmenorrhœa from multiple fibroids, and two of them died, the difficulties of the operation being great. The other öophorectomies were performed for pernicious menstruation, ovaralgia, and threatened miscarriage, and were successful. In no case did menstruation return, although in one there was a slight show of blood.

Of other laparotomies he had performed two, one of them an exploratory incision in a woman greatly reduced by pain and obstruction of the bowels. Cancer of the pelvic organs was discovered. She died very suddenly from supposed embolism. The other laparotomy was a successful hysterectomy. The tumor weighed thirteen and a half pounds, and consisted of the womb with many large fibroid growths. The adhesions to the abdominal walls, bowels, and omentum presented many difficulties and needed many ligatures. The stump, which was fully four inches in diameter, was encircled by Koeberlé's wire-clamp and treated outside of the peritoneal cavity. The patient recovered slowly and without a bad symptom.

W. H. H. G., *Sec'y.*

REVIEWS AND BOOK NOTICES.

ANNUAL REPORT OF THE SECRETARY OF THE NAVY FOR THE YEAR 1883. In Two Volumes. Vol. II. Washington, 1883; and SANITARY AND STATISTICAL REPORT OF THE SURGEON-GENERAL OF THE NAVY FOR THE YEAR 1882. Washington, 1884.

The Report of the Surgeon-General of the United States Navy for the year 1882 is a valuable addition to medical literature. In glancing over it carelessly one might conclude that it contained too much of statistics to be very interesting to the general practitioner, but the book of over six hundred pages is too full of valuable information to disappoint any but the most exacting. Surgeon-General Wales has proved himself worthy of the honorable position he held, and the Medical Department of the United States Navy will be the gainer for a long time to come by his energy and skill in scientific work and progressive medicine.

The four tabulated reports issued from the Surgeon-General's Office cover fifty-four thousand six hundred and forty-six cases.

Such a system of tabulation as that which has been inaugurated must be able in the course of a few years "to furnish a mass of important facts bearing upon the geographical distribution of disease."

Dr. Wales proposes the co-operation of the medical corps of all the great nations, thus forming a great international organization, to promote the collective investigation of disease.

The Museum of Hygiene is reported as being in a very flourishing condition. Contributions are coming in from every direction, and its present quarters are overfilled. It is proposed to secure, if possible, the Naval Hospital at Washington for a permanent museum bulding. Should this fail, a suitable one ought to be built for this purpose. Some attempt has been made to provide medical officers with a better supply of journals. Periodicals of a general character, as well as those devoted to special branches of medical science, were furnished to flag-ships, with instructions that they should be circulated among the other vessels of the squadron. The library of the museum contains six thousand volumes, and a catalogue is being prepared.

Of 8703 recruits examined, 3150 were rejected. This is much to be regretted by those who are friends of the navy, and is a good argument for the increase of our excellent system of training-ships to educate boys for the navy. The table showing the number and cause of rejection is very instructive and valuable, as indeed are all the tables furnished. The strength of the force afloat was 10,631. A very interesting chapter, illustrated by a large chart, is that referring to the "in-

fluence of age upon morbidity." Under the head of "Medical Topography and Sanitary Reports" there is much interesting reading, besides valuable professional information.

Surgeon Walton contributes a very interesting account of San Juan de Porto Rico, and a description of the military hospital. To this report is added a description of frambœsia, or yaws, which disease is said to be the scourge of the inhabitants of Dominica. Passed Assistant-Surgeon Arthur has made the subject of the "Organization of the Chilian Army Medical Department" a special report. The Chilians certainly have a good system for their Sanitary Corps, and there are many matters referred to which might be advantageously copied by our own Army Medical Department. A report on the materia medica collection of the United States National Museum closes the volume. We regret that we cannot call attention to much more of this Report. The book is full of entertainment and instruction. The work which Surgeon-General Wales has so faithfully carried on should meet with the strong support of the general profession, which must also share in the great benefits to be derived from it.

W. T. P.

THE ANNUAL REPORT OF THE SURGEON-GENERAL OF THE UNITED STATES ARMY for 1884.

This report in pamphlet form differs very little from its predecessors. Concerning the issuing of artificial limbs and trusses, Dr. Murray calls attention to the hardships of the present laws: "For instance, a soldier ruptured during the war with Mexico, although he may be receiving a pension on account of hernia, is not entitled to receive a truss." It is recommended that the law be so changed as to permit any one who has been injured in the United States service to receive a suitable truss. It is, however, sincerely to be hoped that this recommendation, and any others which may be suggested for the benefit of our veteran invalid soldiers, will be quickly approved and carried out.

The average mean strength of the army is reported at 20,230 white, 2309 colored troops, and 210 Indian scouts. The average number of troops constantly on sick-report during the year was 1003, or 50 per 1000 of mean strength. The total number of deaths reported among white troops was 250, or 12 per 1000 of mean strength; an increase of 2 per 1000 over the rate for the previous year; 778 being from the results of disease, and 72 the results of injuries. The total number of white soldiers discharged for disability was 838. Of these, 726 were for the results of disease, and 112 for the results of wounds and injuries. The total number of deaths among colored troops from all causes was 22, or 10 per 1000. This is the lowest death-rate yet reached among the colored troops since their organization in the army. Among the white troops diseases of the respiratory organs stand first in numerical importance. Among colored troops the respiratory group stands third, but their death-rate is four times greater in respiratory diseases than for the white troops, "the *deaths being wholly from pneumonia.*" This last statement is particularly interesting and important in view of the fact that the colored troops are more apt to be stationed in malarious districts than the white troops. The colored troops remain longer at frontier stations, it is said, than the more fortunate white troops. Wounds, injuries, and accidents are of first numerical importance among the colored troops and second among the white troops. "The death-rate for injuries was lower for colored troops than for white except in gunshot wounds. The admission-rate for malarial diseases, which in the aggregate constitute 11 per cent. of all diseases and injuries, reported is 10 per 1000 lower than for the previous year. The colored troops present a higher rate than white troops for venereal diseases. On the other hand, their comparative freedom from intemperance continues to be of interest." This subject of intemperance in the army should receive more careful attention. It is not at all likely that the medical reports furnish any adequate idea as to its prevalence or its injury. We commend this subject to the especial attention of the powers that be for improving legislation.

The report considers the rate of occurrence of typhoid fever among white and colored troops. The number of cases reported among the white troops was 214, or 11 per 1000 of mean strength; and 8 cases among the colored troops, equal to 3 per 1000 of mean strength. The deaths among the white troops were 35, and among the colored troops 3. But one man was discharged from service from this cause. "From this it may be concluded that where recovery took place patients usually became fully able to discharge all the duties of a soldier." It is interesting to note that a large proportion of these cases occurred in sections of country where typhoid fever is comparatively rare, and where mountain fever and the mixed typho-malarial fever are quite common. Allowing some possible errors in diagnosis in the army medical corps, the number of cases of true typhoid fever would probably be lessened.

The reports of surgical cases furnish some interesting items. No losses occurring in Indian warfare are reported, the past year being the first for many years not marked by losses to United States troops from Indian hostilities. The great interest at present manifested by the army in rifle-practice has furnished some accidents from gunshot-wounds received at the target-range and also from explosions. There were 9 of these cases of gunshot-wounds, with 3 deaths. There

were 47 injuries received from explosions while loading cartridges. In 24 instances the hand or forearm was injured, in 13 the fingers, in 9 the face, and in 1 the skull, which was penetrated by a piece of brass shell, death resulting from cerebral abscess. In 9 cases the soldiers were permanently disabled, and required discharge from the service for disability.

There were 179 surgical operations performed during the year, 96 consequent upon injuries and 83 for the relief of surgical diseases; 56 were amputations, 3 were cases of trephining for compound fracture of the skull, —1 fatal; the remainder were miscellaneous operations. One case of ligation of the femoral artery, which preceded the intermediary amputation of the hip-joint, was reported.

"Esmarch's method was used only twice, and antiseptics were used five times and twice by spray." This might suggest rather rudimentary methods of procedure. Dry absorbent dressings are very commonly used in our army.

The Army Medical Museum receives very little attention in the report. In the pathological section it is reported that there are at present 9114 specimens; comparative anatomy, 2529; anatomical section, 2236; microscopical section, 8934; miscellaneous section, 735. A list of the contributors follows, and a statement that 13,598 visitors registered at the museum. No mention is made of the work of the gentlemen connected with this museum, who are certainly entitled to great praise. It is deeply regretted that the medical profession of the country cannot derive more benefit from this national collection. Even the simplest catalogue, with some attempt at description, would be of the greatest value to the profession. The efforts of the medical department seem to be entirely reserved for labor in the library, which contains 65,738 volumes and 86,503 pamphlets. The number of civilian physicians using the library is said to be "steadily increasing."

Surgeon Charles Smart, U.S.A., is at present engaged upon the third medical volume of the "Medical and Surgical History of the Rebellion," which "has been delayed by the long illness of Dr. Woodward, lately deceased." It is to be hoped that a fire-proof building for the Army Medical Museum and Library of the Surgeon-General's Office will soon be erected. The claims of hospital stewards have at last received some attention, and it is proposed to increase their pay and require a satisfactory examination for those who desire to occupy that position. It would also be nothing more than ordinary justice to provide them with reasonable protection and respect in their position. The list of dead among the officers of the Medical Corps contains the names of Drs. Crane, Cuyler, and Woodward. Their obituary notices have been carefully prepared. Dr. Woodward's important labors are well known and highly appreciated by the medical profession, of which he was such a brilliant ornament and diligent worker. The medical portion of the "Medical and Surgical History of the Rebellion" will be for him a fitting monument.

The death of Dr. Cuyler was a heavy loss to the Army Medical Department. Although a retired officer, his influence was felt and his counsels were highly respected by his old associates. Dr. Cuyler was a true friend, a Christian gentleman, and an honorable and able physician. Up to the last moments of his life he preserved his love for his profession, and showed a deeper interest in medical affairs and a more intelligent judgment than many who are in active service to-day. The profession of medicine could ill afford to lose him, and his personal friends and acquaintances were witnesses of his generous, faithful character. W. T. P.

THE FOURTH ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF NEW YORK. Transmitted to the Governor February 21, 1884. Albany, 1884.

The general report of the Board, forming the first part of this valuable report, intelligently treats of the causes and prevention of diphtheria, scarlet fever, measles, typhoid fever, typhus, malarial fever, smallpox, consumption, and general diseases, and briefly recounts the lessons taught by their prevalence during the preceding year in the State limits. Sanitary Districts and Sanitary Investigation, Registration, and Vital Statistics also receive due attention.

Under the heading of "School Hygiene," it is stated that "The glaring defect in the American system has hitherto been the sacrifice of the bodily well-being to the intellectual, forgetting that the end of the modern school should be to favor by all possible means the gradual development of the child from the physical and moral as well as from the mental stand-points." It is well that the Board has placed itself on record in this manner; indeed, the urgent importance of this subject can scarcely be overestimated. The caring for the health of our children is a subject which should interest every parent and citizen. It cannot be too persistently taught that the thrift and wealth of nations are contingent upon the physical well-being of the people.

It is urged that, as a protection against contagious diseases, "children that have been sick with measles, scarlet fever, diphtheria, or smallpox should be required to present a certificate of health from their family-physician, or" (better still) "from the health authorities, before they shall be allowed to return to school." It might be added that medical men should be instructed carefully in this matter, for they are too often deficient in

the technical knowledge required for ordinary protection, and themselves at times are serious offenders.

Stench-nuisances receive some attention, and all who recognize the danger must wish the Board had more authority to suppress them, especially near large centres of population.

This admirable report concludes with a notice of adulteration of food and drugs, which in some directions has reached outrageous limits, and should attract a greater amount of attention from the profession. It is most desirable that stronger penalties be attached to the transgression of the existing laws on this subject. New and better laws are needed.

It is too discouraging to notice the difficulties which the Board has to contend with for the protection of the public health when medical and commercial interests conflict, and where those engaged in paying concerns seem perfectly indifferent to the public health. The members of the Board have done their work well and deserve due credit, and we are glad to observe that it is growing in public esteem and confidence, and consequently in usefulness. The report is made up of special reports of committees and inspectors, full of suggestive facts. Last, but not least, is a report on "Milk and its Adulterations," by Edward W. Martin, which deserves wide circulation.

A very useful table might have been added to the report showing how readily milk absorbs poison from the surrounding atmosphere, and the necessity for some inspection as to the manner of exposing milk during transportation and in the houses where it is kept before selling. Also the water-supply of cows deserves some attention as being a very common cause of disease, especially among children. W. T. P.

GLEANINGS FROM EXCHANGES.

The Treatment of Acute Suppurative Peritonitis by Abdominal Section.—At the meeting of the Royal Medical and Chirurgical Society of March 10 (*Lancet*), Dr. Frederick Treves and Dr. Howard Marsh each reported a case of acute peritonitis treated by abdominal section, followed by recovery of the patient. The first case was that of a woman, 21 years of age, who, while under treatment for pelvic peritonitis following gonorrhœa, suddenly developed symptoms of acute general peritoneal inflammation. This was found to be due to the bursting of an abscess into the cavity of the peritoneum. A large opening was made in the abdomen, with antiseptic precautions, and the appearances of acute pelvic peritonitis discovered. The purulent contents were evacuated, and the whole peritoneal cavity was washed out with many quarts of water and a drain introduced. She made a good recovery, and was out on the fortieth day. The second case was that of a medical student, 19 years old, with constipation of the bowels, in whom acute peritonitis was also apparently caused by the rupture of a mesenteric abscess, possibly connected with tuberculous glands. In this case free drainage was also secured, and the patient likewise made a complete recovery.

In the general discussion upon these two papers the course of treatment was very favorably considered.

Convallamarin.—In an article on substitutes for digitalis, Dr. James Stewart speaks favorably of convallaria as a cardiac tonic, and especially commends the glucoside convallamarin as "possessing all the active cardiac properties of the plant, with none of its disadvantages" (such as vomiting and diarrhœa). The dose of the convallamarin is one or two grains: it can be made into a pill with glycerole of tragacanth.—*Canada Medical and Surgical Journal.*

MISCELLANY.

Cholera - Prevention. — The Sanitary Council of the Mississippi Valley has sent a communication to his Excellency Grover Cleveland, President of the United States, calling attention to the fact that during the seventh annual meeting of the Sanitary Council of the Mississippi Valley, held in the city of New Orleans, March 10 and 11, 1885, the health organizations and commercial and transportation interests of twelve of the Valley States being represented, a special committee was appointed to formulate an expression of the views of the Council concerning the action necessary to be taken by municipalities, States, and the general government with reference to the imminent danger of an invasion of Asiatic cholera during the coming season. The report of this Committee was unanimously adopted by the Council, and it was subsequently

"*Resolved*, That the Executive Committee be, and hereby is, instructed to forward to the President of the United States a copy of so much of the formulated views of the Council as relates to the use of the contingent epidemic fund and the National Board of Health."

In accordance with this instruction we have the honor to submit the following extract from the Report as adopted by the Council:

"The Sanitary Council is gratified to learn that Congress has appropriated a sum of money to be placed in the hands of the President of the United States, to be used in his discretion in aid of State and local Boards of Health in the event of an actual or threatened epidemic of cholera or yellow fever, in preventing the introduction and spread of the same, and in maintaining inspections and quarantine at points of danger. Asiatic chol-

era threatens an incursion into the United States in the near future, and realizing (in the interests of life, health, and commercial and industrial welfare) the vast importance of such preventive measures and adequate preparation for effective quarantine before the advent of foreign pestilences, so that they shall not come upon us defenceless and unprepared, the Sanitary Council respectfully and earnestly petitions the President of the United States to immediately convene the National Board of Health and authorize its use of so much of the epidemic contingent fund as may be necessary for preparing and promptly enforcing a vigorous system of preventive measures in co-operation with and in aid of State and local health organizations, with especial reference to Asiatic cholera.

"It is not believed that any argument on the merits of this request is necessary; but should your Excellency desire such, the Committee will take pleasure in responding to an intimation to that effect."

Signed by Pinckney Thompson (Kentucky State Board of Health), President; Joseph Holt (Louisiana State Board of Health), Vice-President; John H. Rauch (Illinois State Board of Health), Secretary; — *Executive Committee Sanitary Council.*

THE NEW YORK MEDICO-LEGAL SOCIETY.—Mr. Clark Bell, having served two successive terms as the chief presiding officer of the New York Medico-Legal Society, at the January meeting made an address, in which he reviewed the remarkable growth of the Society and its increased usefulness during the past and its bright prospects for the future. Mr. Bell has been an energetic, able, and useful executive officer, and the Society has prospered under his management. He was chiefly instrumental in forming a special library which is now the best single collection in the country of works on medical jurisprudence outside of the Surgeon-General's Office at Washington. The proceedings of the Society are published regularly in the *Medico-Legal Journal*, which is now in its second volume, and is a valuable acquisition to the literature of forensic medicine. Last year the area of usefulness of the Society was increased by altering its constitution so as to admit members from all parts of the United States and the Canadas. Mr. Bell suggests, with reference to lunacy reform, that the Governor of New York shall name a commission to report upon the lunacy laws, recommending such changes as may be needed to suit the exigencies of the times and the needs of the defenceless class who claim our sympathy, care, and protection. The success of the Pennsylvania Commission should be a strong argument in favor of the adoption of this suggestion in New York. Prof. R. O. Doremus, who succeeds Mr. Bell as president, is also a gentleman of distinction and ability. Under his administration the progress and continued prosperity of the Society seem assured.

NOTES AND QUERIES.

THE ACTIVE PRINCIPLE OF ERGOT.

MR. EDITOR,—A short editorial on "Ergot" in the last issue of the *Philadelphia Medical Times* (March 21, 1885) shows that there is quite a diversity of opinion among physicians and clinicians as to what the active principle of the drug may be.

In 1877 and 1878 I made a large number of experiments upon animals to determine the physiological action of sclerotic acid, then claimed by Profs. Dragendorff and M. Podwissotzky as THE active principle of ergot.

I will not go into the details of the eighty experiments I made in working out the action of the drug, but simply give my conclusions, which were as follows:

1. Large doses produced increased peristalsis of the intestines, diarrhœa, dilatation of the pupils, hurried breathing, trembling, staggering, and (in some animals) partial paralysis.

2. It produced contractions of the pregnant uterus. Two pregnant rabbits, in the middle of gestation, were made to abort.

3. It slowed the heart by its action on the contained motor ganglia.

It increased the blood-pressure by stimulating the vaso-motor centres.

These conclusions indicate that the action of sclerotic acid is almost identical with that of ergot, except that it does not slow the heart through any influence on the pneumogastric, as P. Eberly* claims for ergot.

The ecbolic properties of sclerotic acid were quickly and positively shown in the two rabbits that aborted shortly after the drug had been administered hypodermically, and this, too, in spite of the fact that ergot and all its constituents usually have very slight effects upon rabbits.

The power to produce contraction of involuntary muscles by sclerotic acid was also made manifest by the strong peristalsis of the intestines, the wave-like motion of which could frequently be seen to be so strong as to be transmitted to the abdominal walls.

Prof Von Holst used sclerotic acid in 0.04 to 0.05 gram doses injected subcutaneously with successful therapeutic results, but my experiments lead me to believe this to be entirely too small a dose, because I gave it in gr v doses hypodermically to cats, rabbits, pigeons, etc., without producing death. In fact, from gr. i to gr. v were necessary to produce physiological effects. (I obtained the drug in the original packages direct from Merck, of Darmstadt.) Now, gr. v is eight times greater than Von Holst's dose, and is equivalent to ʒss of powdered ergot, if 0.05 gram of sclerotic acid is supposed to be equivalent to ʒss powdered ergot, the recognized therapeutic dose. In fact, the toxic effects of sclerotic acid are very slight, and I doubt if any of the preparations of ergot, except the oil, are capable of producing primary toxic effects upon the circulatory or nervous systems.

My belief is that the crude drug or a good fluid extract are the only forms of ergot upon which we can rely for positive therapeutic effects. The supposed active principles are sure to be unstable, on account of the low formation of their source.

CHAS. M. SELTZER, M D.,
N.E. cor. Seventeenth and Green Streets, Phila.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 15, 1885, *TO MARCH* 28, 1885.

TAYLOR, M. K., MAJOR AND SURGEON.—Granted leave of absence for one month, to take effect about April 15. S. O. 46, Department of Missouri, March 21, 1885.

HAVARD, VALERY, CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 65, A. G. O., March 21, 1885.

RAYMOND, H. I., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to duty at Fort Gaston, California, as post surgeon. S. O. 30, Department of California, March 20, 1885.

* Wood's Therapeutics and Materia Med., p. 461, first ed.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, APRIL 18, 1885.

ALUMNI ADDRESS.

OUR PERSONAL EQUATIONS.

An Address delivered before the Alumni Association of Jefferson Medical College, April 1, 1885,

BY J. W. HOLLAND, A.M., M.D.,

(*Class of* 1868,)

Professor of Practice of Medicine and Clinical Medicine, University of Louisville, Kentucky.

GENTLEMEN, — In preparing his thoughts for an occasion like this, a speaker who has had many predecessors will be lucky if he finds for his flail some straw left unbeaten by former threshers.

That repetition which in the class-room deserves the appellation "mother of learning," on the rostrum might be condemned with the forcible adjective applied by Othello to the iterations of Iago. The customary themes of medical orators,—medical education, expert testimony, sanitary science, and professional ethics,—with the phrases staple in such discourses, have been worn quite threadbare. The most fit for these halls, *The Ideal Medical College*, is one which were better left to some successor more sure of his own opinions and more desirous of bringing the world into conformity with them. The old alumnus who has taken a turn through the hospital and the laboratories is no longer free to doubt that the process of evolution is carrying medical teaching through ascending phases. Perhaps, with a conviction in favor of a graded curriculum, he is disposed to find fault with the annual repetition which, like a circle, makes no progress. If so, then his own experience as a student may be appealed to in proof that there was a decided advance where it was needed, namely, in his own medical knowledge. His second course of lectures was to him not the same as the first: it presented to his larger intelligence wider reaches than he could at first take in. The circle repeating itself, and, so far as the student is concerned, widening in each cycle by his mental growth, makes the spiral, the ideal course of philosophic teachers. As he looks about him, he can see that the nursing mother moves with her Juno stride by sure paths revealed to eyes that range under level brows. Step by step she has walked ahead of us, mending her pace as we quickened ours, never out of the reach of good movers, yet always leading them.

Shall we inveigh against the imperfections of our nurture, who failed so often to hearken to the maternal voice? The faults to be deplored were those in ourselves, that we did not use our opportunities better.

Then we daily sat down to a board of seven courses, and nibbled, like dyspeptics, at the generous fare for which we have since hungered. Remembering the uniform perversity of mankind, it may fairly be questioned if the newly-adopted foster-brothers have done much better than we, notwithstanding the epicurean cooks who lately sharpened their dull appetites with savory sauces.

There were great cooks in our day, too, who could serve a lecture in a way to tempt an angel to learn medicine, however useless the art might be in the land without sickness.

Sitting under a broad porch which gave upon a lawn of that blue grass which makes fat cattle and glad harvests, I heard an old alumnus discourse of our Alma Mater. Said he, "They say that a man is thoroughly renewed every seven years. I want to go back to 'Old Jeff.' once for each renewal, in the hope that the new man will learn better, things old and new, than did the former man what was taught in his time." He had been back once to take draughts from the maternal font, but his business and his babies have since anchored him fast in Kentucky, and he consoles himself with the dream that with other Jeffersonian angels in Paradise he may again hear Dunglison tell about his experiments on Alexis St.-Martin, Meigs dilate upon woman and her glorious mission of motherhood, Gross lament in moving accents the lost art of phlebotomy, see Biddle wave a graceful salute before relating in rhythmic speech the opinions held by Dioscorides concerning the concrete juice of the unripe capsule of the papaver somniferum, and Pancoast go through the dextrous motions of operations for which that happy land will furnish no clinical material. It was a glad reunion as I sat with this foster-brother, that June day fifteen years ago, and looked out on his waving corn and the gold-spotted meadow. I brought him news of the Alma Mater,

and set him raking together the embers of old fires and helped him blow them into something of their ancient warmth. Would that this occasion were less formal, that all of us might sit as by a family hearth and each recount in turn the familiar things that lose none of their charms by age! We might hear some new-born brother tell of things the gray-beard thought his own peculiar experience. I am sure that my counterpart has sat on these benches since I left them. More than one callow youth has come out of the New West to this city of traditions, ready to wonder at Independence Hall, and at the Franklin Library founded by the "Junto" of immortal memory. More than one, as he took an early pilgrimage to the grave at Fifth and Arch Streets, has felt that Benjamin Franklin, like St. Paul, had been "a citizen of no mean city." More than one has felt a fresh sense of his own importance as the elder Gross indorsed his letter of introduction and consigned it to a pigeon-hole with other papers of weighty consideration. More than one, ay, thousands, with hearts touched by these small amenities from a great man to his insignificant students, have felt and proved themselves bound to him by hooks of steel.

But, if I hold to my purpose, it is time to stop the flood of reminiscences that stream in. It were grateful to all of us to celebrate the worthies of our college days and beguile the hour in retrospective ramblings. But such an eloquent tribute to their memory has been given in this place, by one who preceded me seven years ago, that the thought of rivalry in this field oppresses me, and I turn to another theme for my word-spinning. In the half-hour for which I feel privileged to hold you by the button there is opportunity to air some reflections about *The Personal Equations* of medical inquirers. If I succeed in presenting familiar facts in a new grouping, and in such a way as not to be disagreeable, then I shall be satisfied. The importance of these considerations may not strike every one. For scientific inquiry often meets with the reception accorded by Confucius to the inquisitive boy. As Carlyle relates it, the boy asked Confucius, "How many stars are in the sky?" Confucius replied, "he minded the things near him." "Then," said the boy, "how many hairs are there in your eyebrows?" The sage replied, "he didn't know and didn't care."

About ninety years ago the astronomer royal of England regretfully announced that he had to part with his diligent and useful assistant, as he had lately acquired an inveterate habit of recording his observations half a second too late. The whirligig of time brought the assistant his revenge, as later astronomers put just as much reliance on his observations as on those of his principal. It was found that both were slightly wrong; both were liable to err, as are the most skilful observers. Indeed, it is only when that various creature, man, is not a part of the machinery that we can put entire trust in the register. These variations from the absolute truth in measuring minute divisions of time and space can be estimated by comparison with instruments of precision, and are usually found to be constant for the same person in the same class of observations. The habitual error characteristic of a person is called his personal equation, and is a correction to be applied to his record of all events of like nature. Time is an element first in perceiving, next in willing, last in recording. These processes in different men go on with varying degrees of rapidity. As quick as thought is, there is time in it for some to fall behind others. Astronomers tell us that there are variations in researches that do not rank as precise, which are much more marked than those just referred to. It is probable that examples of *personal equation*, using the term in its widest sense, are to be found in every form of inquiry. As instances of it in observations that do not admit of mathematical measurement, we are told of the different pictures drawn by different observers of nebulæ and the corona of solar eclipse. It would be an easy problem for some ophthalmologist to determine if unsuspected and uncorrected astigmatism may not account for some of these variations, as Liebreich showed its effects in certain peculiarities of Turner's landscapes. While we may not hope to secure an exact valuation of the personal equation in such subtile forms as these, it is of importance to know when allowance should be made, and in what direction to apply efforts for amelioration of the defect.

Turning from the distant objects of study, let us follow the example of the

wise Confucius, and "mind the things that are near us." In the science we cultivate there are some occasions for micrometric data in physiological research. In every department of medicine it is highly important that observers should see, hear, understand, and report accurately, so that others may apprehend rightly the appearances of disease and the effect of remedies. If it were not for the frequent gleams reflected on every hand from the spectacles of the young, showing that the enterprising oculist with his trial glasses has been abroad in the land, one might fear that uncorrected myopia was responsible for some errors. Prof. Hermann Cohn states that about sixty per cent. of the medical graduates of Breslau were short-sighted. It is not likely that medical science runs any risk from this quarter. Ordinary short-sightedness does not materially affect observations made at the bedside, even if the observer should be so exceptionally stupid as not to find out his defect during his medical studies, or so remiss as not to avail himself of the correction afforded by glasses.

Besides the sense of form, there is the wholly distinct sense of color, in which a considerable number are unconsciously lacking. For a hundred years *Daltonism* has been recognized as a physiological curiosity, but it is only a few years since its practical bearings have attracted the attention of persons long familiar with the errors of vision for form. Examination of something like a quarter of a million persons in different parts of the world shows that about four per cent. of the males in any community may be counted on as radically color-blind, and relatively unfit for occupations requiring the use of the color sense. Dr. Jeffries relates an instance of a color-blind boy at the Boston Institute of Technology who failed in Chemistry, which he had chosen as a profession, because without some normal-eyed person by his side he could not determine the color of precipitates. Apart from this congenital and incurable defect, experts have detected a hitherto unsuspected amount of ignorance of colors and color names among males of all ages and all degrees of ordinary education. It shows itself among teachers of physics, and even those who have technical uses for the nicest color sense. Virchow, at the meeting of the Anthropological Society of July, 1878, urged the practical teaching of colors, as he had found that the majority of young men were incapable of selecting with certainty the finer shades of the most common colors. In his experience "It was exceptional that a medical student could tell whether a red shaded into a black, blue, or brown, or whether a yellow shaded into gray, white, or green." "This was a lamentable defect of the eye very seldom dependent on color-blindness, but on ignorance of colors and lack of practice." Working in the mechanic arts that employ colors, artisans soon acquire a very unusual refinement of the color sense, as is shown by the accuracy with which they differentiate chromatic gradations and combine colors to produce a desired tint.

It would not be a wholly fruitless search if some one with a trained and sensitive ear were to take the pitch of certain sounds heard in thoracic auscultation, and then test a medical class by means of organ-pipes, to ascertain if these sounds do not sometimes pass the limits of hearing in those whose range is not of the highest. Dr. Wollaston remarked total insensibility in some persons to the sound of a small organ-pipe which in respect to loudness was far within the ordinary limits of hearing. There are individuals who have keen ears for the lower sounds who never hear the squeak of a bat, the cricket's note, or even the chirrup of a sparrow. Sir John Herschel notes that while some persons not at all deaf can just hear a note four octaves above the middle E of the piano, which is below the chirrup of a sparrow, others have a distinct perception of sounds two octaves higher.

It is a reasonable conjecture that some of us present who have normal hearing as respects the middle and lower octaves, are defective in the highest without knowing it, and thus fail to hear chinking or hissing sounds, like the percussion-note known as the cracked-pot sound, and some sibilant râles, fine crepitations and creaking, friction-sounds, to which others are acutely sensitive. It will be understood that this personal equation bears no relation to what is called "a musical ear," which is properly defined as a faculty of distinguishing discords. Like color-blindness, it has probably an anatomical basis, is congenital, and not susceptible of improvement.

There is, however, in those untrained in music a relative inability to discrimi-

nate in the pitch of sounds of percussion and auscultation, like the before-mentioned ignorance of color-shading. In his essay on variations in pitch of percussion and auscultatory sounds, Prof. Flint observes that to the musical ear, more especially if skilled in discriminating musical tones, a disparity in pitch is more quickly as well as more clearly distinguished. When the beginner finds a difficulty in perceiving a difference in sounds apparent to the practised diagnostician, Prof. Flint has made it manifest by requesting him to compare the two sounds as if they were musical notes, with reference to pitch. If he has had musical cultivation, the disparity is quickly perceived. Such a preliminary training has been found of material service in acquiring expertness in auscultation and percussion.

In an article in the *Fortnightly Review*, based upon a large amount of testimony and controlled by the methods in use by statisticians, Mr. Francis Galton states that he finds great differences in the power of forming pictures of objects in the mind's eye. This power of sight-memory is a reversal of the order of events in the original perception. An excitement of the brain propagates itself outwards to the visual centre back of the retina, producing pictorial imitations more or less true or vivid, according to the vigor of the outward impulse. In some this faculty is habitually weak, and the propagation will take place only under such peculiar states as dreams, delirium, great excitement, or stimulation by drugs. Others reproduce past scenes with a distinctness little short of actual sight. It was found that the medium quality of mental imagery, though fairly vivid, was incomplete. Only one in sixteen had it in the degree to be desired. I venture the opinion that this faculty of mental imagery is the basis of that knowledge of topographic anatomy of so great importance to the operator especially, but valuable to the doctor at every turn. Upon it, to a great extent, depends the student's ability to state the relations of nerve, artery, and vein, without resorting to the mnemonic arrangements of A., V., and N. that quiz-masters cram them with. This natural gift, when joined to certain other qualities,—self-reliance and mechanical tact,—is the making of a surgeon. I have known a man of fine mind, well equipped in these last-named respects, and who had good opportunities for advancement, fail as an operator of the first rank because he lacked this power of visual memory. It is not rare, on the eve of an operation, for a surgeon to refresh the pictures memory drew in fading colors, by resort over-night to the anatomical atlas. This serves the purpose in many cases, but it is not the best way of knowing the anatomy of a surgical region. According to Napoleon, the rarest and most valuable trait in a soldier is "two-o'clock-in-the-morning courage." So I would say, the ideal anatomist is one who, awakened at midnight for an emergency, has his knowledge at his fingers' ends.

It is the opinion of Galton that in twelve out of sixteen this topographic memory may be developed to a useful degree by education. He lays especial stress upon the testimony of the Director of the National School of Design, in Paris, who, beginning with the simplest figures, trained his pupils to study models with the view of drawing from memory. After four months' practice they had no difficulty in summoning images at will, holding them steadily in the mind, and drawing them with accuracy. He relates the experience of an engineer, who, after a few weeks of systematic practice, found to his delight that he had become an adept in color-memory, which up to that time had been an undeveloped faculty. Mechanicians, engineers, and architects, who practise the drawing of an intended structure in all its dimensions, usually have mental vision of remarkable clearness and precision. This faculty must have been possessed by the late Prof. Wallace to an unusual degree. Many here present will remember how, by off-hand modelling with colored clays, he would give plastic expression to his picture-memory of anatomical details. With a few deft touches he would make tumors rise before the class, or would inflict on counterfeit wombs all sorts of pathological changes.

In the presence of older and better teachers than myself I hazard the suggestion that a course of practical anatomy in which the student would be required to draw, in outline, from memory, or roughly work up in clay, the forms and relations of parts laid bare in his dissections the day before, would be a valuable addition to the present means of instruction. Conning of text-books on anatomy gives verbal

memory, but, according to Galton, bookish methods tend to repress this gift of nature. It is possible to starve it by disuse, and again to feed it by judicious methods of education. There are many present, fresh from the quiz-room, who can give, by an effort of verbal memory, the layers of structure encountered in making the dissection for inguinal hernia, who cannot make a sharp picture of them in their minds, much less an outline-drawing of the relations of the inguinal rings and other parts concerned. If each of ten doctors taken at random were to describe faithfully the mental vision he would have of the path of a bullet shot through a given spot in the trunk of a subject, I warrant there would be evidence of personal equation as well as of imperfect models of instruction. It may be objected that the proposed improvement on the conventional method requires that the student should have an unusual talent for drawing. To make an outline indicating the form and relative position of parts does not call for any artistic power worth the name. Experienced teachers assert that any one not blind, lame in the hand, or imbecile, can acquire at least this degree of proficiency. It is within the reach of any one who can learn the art of penmanship.

In educational conventions one hears a good deal said about the *New Education.* Its advocates claim for it that it is the cream of traditional methods worked into a system. It is wholly different from the Chinese plan of committing to memory endless pages from Confucius, and thus loading the mind with good-for-nothing lore. Its primary aim is avowed to be to teach the pupil to see, hear, and understand correctly, in order that he may take up the study and work of after-life as free from defects of his five senses as culture can make him.

Practice in drawing is a salient feature. It has been found that along with the training of the hand, this tends to develop quickness and accuracy of perception, and a fidelity in objective memory that is surprising to those educated under the old routine. Courses in music have been for years an element in the public school curriculum in many parts of our country, with results equally gratifying.

While it has not been expected that any one can be made to hear notes beyond his normal scale, improvement in the power to discriminate the pitch of sounds has been unequivocal. You and I may consider ourselves too old to go into training of this sort; but in this we differ from a busy practitioner, over sixty years of age, a neighbor of mine, who, in a recent affliction, found solace and substantial self-culture in taking a course of drawing. We can at least see to it that our own children, and the students we send up to Alma Mater in the twentieth century, have not only a good academic education, but, better than that, have been taught with especial reference to seeing, hearing, and understanding correctly whatsoever things come up in the life-work before them.

It is a popular impression that when one brings to the aid of the lens in his eye other lenses outside, the chances of fallacy are thereby removed. That this is erroneous, working microscopists are well aware. There is a distinguished histologist in New York who teaches, and demonstrates to the apparent satisfaction of his pupils, that there is a reticulum in the blood-corpuscle which is an exhibition of the net-work present generally in protoplasmic structures. On the other hand, the great majority of our histologists and the most skilled manipulators of high-power objectives assert their inability to see the net-work spoken of. What they see in his demonstration is, according to them, the usual appearance presented by granular bodies when viewed slightly out of focus. If the drawings made by him represent the cell as he sees it, there is decided difference between his microscopic vision and that of most experienced observers. This would be an instance of personal equation on the part of some one. As to the party to whose observations a factor of error must be applied, photography alone offers a final judgment. By this means the late Dr. Woodward succeeded in convincing foreign microscopists that the resolution of Nobert's nineteenth band was not simply a matter of faith, but one of sight.

It may turn out that the difference is not one of sight, but of interpretation. The liability to misinterpret besets the path of the scientific observer in every field. When Carlyle said that "a man sees what he brings with him the power to see," he meant that through the optical apparatus of vision there was an eye of the

intellect looking, perceiving, and interpreting. This recipient eye back in the optic lobes, or perhaps in the visual centre of the cortex, colors every object of sensation whose image passes into it. The mind is conscious of that object, not as it entered but as it has been refracted by the prismatic medium of personality through which it was transmitted. A great obstacle in the way of seeing things plainly as they are, is a prepossession in favor of a certain view of them. Pride of opinion may thus create a personal equation; so may a love of sensation or a rage for novelty; so may the fanaticism of hypothesis. To a pet hypothesis has been ascribed the quality of assimilating all observations to itself. Standing erect among the facts, it is a convenient stem around which the investigator twines his pliant impressions, stem and vine each helping to hold the other up. It is not my intention to say aught in dispraise of theory, as such. It has been well said that nothing is so helpful to an investigator as a good theory. Like wine, it is a good servant but a bad master. Used rightly, it is a wholesome stimulant, but some thirsty souls are so constituted that they can't take it in moderation. If they once take a sip at a theory they tope with it, and under its influence see things double, and lose their mental equipoise, until time and the jostling of critics sobers them off.

It has been recently announced that the new American Society for Psychical Research disclaims that its object is the study of supernatural phenomena. The ground they propose to tread is tolerably safe so long as they confine their inquiry to those mental states in which certain persons called "thought-readers" seem to have the faculty of knowing some of the ideas of others. If we may judge by the career of the English society of that name, there is a tendency in those who concern themselves about "thought-transference" to step over into the twilight-land of clairvoyance, where marsh-meteors soon lead them into a bog. The large proportion of doctors in the American society is an assurance that it will not be allowed to degenerate, as did the English one, into a medium for giving consequence and permanence to all the ghost-stories treasured in bereaved families as assuring glimpses of the unseen presence of their dead. Doubtless there are more things in heaven and earth than are dreamt of in our philosophy; but when an observer's feelings are strongly interested, they so influence his judgment as to what he sees of these undreamt-of things as to make him a very unreliable witness.

It would be difficult to exaggerate the tendency to self-deception in examining the phenomena of spiritualism, when the investigator is possessed with a longing for evidence of the spiritual existence of some dead friend or relation. Only those beings who can get outside of themselves, who are able to put aside the craving for communication with the dear travellers in that undiscovered country,—only these are qualified to estimate with judicial fairness the extravagant pretensions of clairvoyance, spiritualism, and mesmerism. These are mentioned together because opinions, like other furniture, "go in sets," and it is in these that the dominant idea referred to becomes a personal equation of notable size. It is a matter for medical men to consider, inasmuch as it is vaunted that those who believe in and resort to these occult powers have great advantages in diagnosing and curing disease. It is alleged that some persons possess an endowment by nature of seeing through opaque objects; they are clairvoyant,—see by transcendent vision things out of the common range. A patient of mine just dropped in with a friend at the office of one of these "psychometric healers," who nearly frightened her out of her wits by gravely telling her that he could see that she suffered from occasional headache and pain in the side, due plainly to the fact that her liver was bound back to her diaphragm. She thought it witchcraft that he should, without examination, divine these things, but was somewhat reassured when told that, as for the headache and sideache, they might be counted on as symptoms in almost every woman that entered a doctor's office, and that she would be in a bad way if her liver was not so anchored. I have never seen, or heard on good authority, of one of these gifted beings that had the powers of diagnosis possessed by a new medical graduate, and yet belief in the verity of their claims has grown, by waves of popular excitement, until it includes people of undoubted intelligence. At times the epidemic has seized men of science, and even educated physicians, though the vast majority of the well-instructed look on clairvoyance as un-

profitable in speculation and quackery in practice.

In the library on Fifth Street, founded by Franklin and his "Junto," is a copy of a report made on Animal Magnetism, by Dr. Franklin and others, to the French Academy just one hundred years ago. Like all documents that Franklin had anything to do with, it is thorough and perspicuous. The experiments by which they were convinced of the baselessness of Mesmer's claims are models of ingenuity. They show the master mind of that wonderful Philadelphian, who had a seeing eye of the highest power.

Did you ever think how much his mental vision resembled the spectacles he invented? Half the glass was for near and half for distant objects. Nothing that interested him, either remote or at hand, was he content to view dimly. Upon them all, smoking chimneys and thunderbolts, he directed his clear and true sight. The pretensions of Mesmer, alike with the pretensions of tyrants, he saw through and exhibited to the gaze of all. At the same time, in his report he concedes a certain value to the phenomena exhibited by those said to be mesmerized: they furnish "important evidence of the power of the imagination."

Again and again did the French Academy respond to the popular clamor for investigation, until it dismissed the subject of clairvoyance, in a report published in 1837, by stating that the facts furnished have nothing in common with either physiology or therapeutics. A standing offer was made by Burdin, and since repeated by others, of large sums of money to any one who should produce a clairvoyant able to read through an opaque medium. Although the experiment has been variously altered at the instance of those making the trial, no one has yet succeeded in winning the prize. The attempts have, however, resulted in the detection of the means by which the credulous have at other times been imposed on. When the neurologists of the Society for Psychical Research shall discover one individual who can satisfy this reasonable demand, it will be conceded that in this direction their labors have not been in vain. Experience forbids us to hope that such a one exists. For fifty years those claiming to see blindfold what is not revealed to the eye have not brought to human knowledge a single new fact concerning the inner workings of things. What discoveries in physiology and pathology would flow from the use of any instrument that would compensate, even in a small degree, for the limitations of sight and hearing! So often baffled and led astray by the inadequacy of the eye and ear, mankind would then have to make allowance for a personal equation in doctors who attempted to solve medical enigmas without its aid. Alas for the beautiful dream! no clairvoyant has ever penetrated the veil further than common people. Indeed, they have left the glorious privilege of adding to the sum of scientific knowledge entirely to folk of five senses only, while they grope on in a limbo where honest minds seem forever doomed to struggle with fraud, credulity, and superstition.

If the Society for Psychical Research shall make a report differing in important particulars from the settled convictions of most men of science, again, as often before, will be raised the charge of "bias and credulity," and again will be heard the retort of "scientific prejudice and intolerance." Between these two extremes it will be hard to find and hold the diagonal line. In such a controversy, to determine on which side will be the great defect, we shall be much in want of a mental dynamometer which shall give us some approximation to the personal equation of mental strength in the disputants. All the traditional methods of gauging the mind depend too much on tests of memory,—quite a subordinate faculty. It does not seem at all likely that man shall ever invent any adequate plummet to sound these "abysmal deeps of personality." Nor can he ever be satisfied to turn away from this question as Confucius did from that concerning the number of hairs in his eyebrow, and say, because he does not know how much allowance to make for personality, therefore he will not care for it as a factor in medical investigation.

Of one thing we may be sure, that in cultivating our five senses much may be done to lower all their personal equations. While thus engaged there can be no doubt that we walk on solid ground and in the middle of the road. Instead of forming magnetic circles in the dark, waiting in a pliant hour for spiritual insight to develop to the point of receiving impressions concerning things which shun the light of

day, the sure way will be by incessant practice to sharpen the natural powers of observation and strengthen the reasoning faculty so as to acquire that professional sagacity which notes myriads of fine differences and resemblances that escape the scrutiny of the untrained intellect. May ours be that clear-sighted skepticism that would discount every personal equation in ourselves or others, that would turn the white light of criticism upon every reputed revelation, lest some fallacy steal in under the garb of truth.

To free itself from bias and achieve perfect uprightness, the scientific mind must be imbued with a religion in which silent adoration shall be offered to those natural laws which have been called the thoughts of God; in which the best faith shall be honest doubt, the worst unbelief shall be to question the permanence and beneficence of truth, and in which a grievous sin shall be imputed to him who is indifferent to its pursuit. Should it ever want a litany, what better invocation than

> "Give me no light, great heaven, but such as turns
> To energy of human fellowship;
> No powers, save the growing heritage
> That makes completer manhood."

ORIGINAL COMMUNICATIONS.

THE SPINAL ARTHROPATHIES.—A CLINICAL REPORT OF SIX CASES OF CHARCOT'S JOINTS.*

BY A. SYDNEY ROBERTS, M.D.,

Surgeon to the Philadelphia Hospital, Instructor in Orthopædic Surgery in the Medical Department of the University of Pennsylvania.

CASE I.—M. K., male, æt. 41, referred to the New York Orthopædic Dispensary from St. Luke's Hospital on May 5, 1879. Hereditary history unusually good. He is a moderate drinker. Health excellent until manifestation of present joint-trouble. Married, and the father of five healthy children.

Condition on Date of Entry.—A large nodular tumor was found over the left hip-joint, oval in shape, the long axis of which corresponds with line of Poupart's ligament. Transverse diameter of normal limb over hip-joint, 22 inches; of affected limb at same point, 30¼ inches. No muscular atrophy detected by measurements of circumference. Left limb 1⅝ inches shorter than its fellow; measurements made from the umbilicus. External iliac fossa of left side filled with osteophytes, which add to bulk of tumor. The ligamentous structures about the joint seem entirely destroyed; motion of limb abnormally free in all directions. Head of femur probably absorbed or greatly atrophied. Limb abducted and rotated outward. What appears as the head of the femur is anterior to its normal position, lying under a "shed" of bone built out from the pelvis, which covers its atrophied extremity like an umbrella. When the patient flexes the limb the upper extremity of the femur glides forward until it catches under this shed of provisional bone, which, acting as a fulcrum, allows the patient to flex and rotate the limb with ease.

A thorough examination of the patient for evidence of a central lesion revealed the absence of numbness of limbs, of pain, or of constricting bands; sensation slightly impaired on left side. On right side reflex action increased on titillation of soles; none on left. No tendon-reflex in either limb. Sways with "closed eyes test."

Condition Eighteen Months Later.—The patient presented all the marked symptoms of locomotor ataxia. Two years from date upon which the above notes were recorded (May 5, 1879) he is confined to bed, with complete loss of muscular co-ordination.

Remarks.—The case exhibits an arthropathy existing four and a half years prior to the development of active tabetic symptoms, and shows a tendency from early stages to the formation of osteophytes about the joint, with early atrophy of the upper epiphysis of the femur.

At no time during the progress of the lesion were there developed reflex neural symptoms that would point to joint-inflammation.

The joint-lesion (swelling and tumefaction) diminished as the active symptoms of ataxia advanced. Provisional callus was thrown out about the atrophied extremity of the femur as a substitute for the destroyed acetabulum.

CASE II.—Male, æt. 44. Registered as an out-patient in the New York Orthopædic Dispensary on January 29, 1879. The following notes were recorded.

Hereditary History.—Parents living and healthy; one brother died of phthisis. Patient is married; has three children, two in excellent health; the third has an intrapelvic abscess (subsequently died of amyloid degeneration of the kidneys). Patient has had to work very hard, with considerable mental anxiety; no other known cause for present disease.

The left knee and ankle are enlarged, the latter more so relatively than the knee. The patient states that seven years ago, while working, a heavy box fell upon him, injuring the ankle. The joint became swollen, and he

* Read, by invitation, at a meeting of the Neurological Society of Philadelphia, December 26, 1884.

was "laid up for two months." He recovered, and suffered no inconvenience for one year; the swelling again returned in the same ankle and involved the entire leg. At this time he was incapacitated from work for three months; he recovered, and has had no active joint-symptoms since. Has never had an abscess about the joint.

The urgent symptoms at present examination are those of locomotor ataxia. He cannot walk without staggering, and when attempting to do so in the dark, or with closed eyes, falls. Suffers from ataxic pains in the right leg and arm. Is uncertain in guiding his finger to the tip of his nose with his eyes closed, or in putting his heel on a designated spot. Sensation impaired in right hand and arm; has difficulty in buttoning his coat with that hand. When standing or walking in his bare feet he feels as though he were on cushions; vision unimpaired (eye-ground not examined).

On February 4, 1879, Dr. Cloves Adams saw the patient in consultation and thought him to be suffering from locomotor ataxia in the third stage, with osseous changes in left ankle and synovitis of both knees.

The patient returned to the Dispensary in September of the same year, with a marked elastic swelling of the right elbow-joint.

A year later (November, 1880) he was referred to the clinic of Dr. E. C. Seguin. He again applied to the Orthopædic Dispensary on February 14, 1881. The ataxic symptoms had advanced; he walked with extreme difficulty. The condition of the joints remained about the same as when last examined, now four months ago.

During November, 1881, the patient was critically examined by Dr. S. Weir Mitchell and pronounced to be in the third stage of locomotor ataxia, with spinal arthropathies of the right elbow and left ankle-joints. It was noted that the circumference of the elbow-tumor had materially diminished since the last measurements were recorded (decrease of two and a half inches).

Remarks.—The joint-enlargements in this patient presented three characteristic peripheral ataxic conditions:

1st. At the knee-joint synovial irritation, indicated by the physical signs of a chronic synovitis, although at no time during its course was there evidence of inflammation.

2d. A characteristic, doughy, nodular ataxic joint-tumor of the elbow, largely composed of osteophytes and excessive synovial secretion.

3d. Hypertrophy of the lower epiphyses of the tibia and fibula, with but slight synovial irritation.

The peripheral manifestations at the knee and ankle accompanied the earlier symptoms of ataxia; the elbow-tumor entered abruptly upon the second stage of the sclerosis. I am indebted to my friend Dr. Newton M. Shaffer, of New York, for the privilege of reporting the above notes.

Case III.—J. H., male, æt. 45. Was admitted to my wards in the Philadelphia Hospital on April 3, 1883. The following notes were recorded: A vigorous, well-nourished man, with little personal knowledge of his family or their history. Knew his parents lived to an advanced age, but thought both of his brothers had died, and likewise two sisters. Acknowledged to being strongly addicted to the use of alcohol. He thought his present trouble arose from a "dissipated life and constitutional syphilis."

Two years ago, after a debauch, his attention was directed to painful swelling of his right great toe. This lasted a few days, and as the pain and swelling of the toe subsided the right ankle-joint enlarged. This swelling slowly and painlessly increased, and three months from its onset the same condition appeared in the left ankle-joint. Without especial discomfort to the patient, this joint enlarged. He continued drinking to excess, and was admitted to the hospital in a state of chronic alcoholism.

An examination two weeks after admission, when all traces of alcoholism had subsided, gave evidence by the following facts of a central lesion: He had suffered from constricting pains about the abdomen and occasional darting pain in the region of the hips and thighs for the past year. He also experiences considerable difficulty in walking, especially at night. At present he has a staggering gait. Absence of patellar reflex in both limbs; sways and falls with "closed eyes test," and has difficulty in finding tip of nose with forefinger when eyes are closed.

The metatarso-phalangeal articulation of the right great toe is anchylosed. Both ankle-joints are enlarged apparently by a diffuse hypertrophy of the epiphyses of tibia and fibula. This increase has almost doubled their normal circumference. The subcutaneous tissues are slightly œdematous. The capsules of ankle-joints are distended and elastic.

When first admitted, the tissues about the ankles and legs were swollen, presenting the appearance of diffuse cellulitis. This subsided in a few days, from rest and local treatment.

My colleague, Dr. C. K. Mills, saw the patient with me in consultation and confirmed the diagnosis I had made, of posterior spinal sclerosis with accompanying arthropathies at ankle-joints.

Remarks.—The joint-hypertrophy had

preceded any active symptoms of ataxia. The character of the joint-enlargement was that of bony hypertrophy, without a tendency to the formation of osteophytes or to a nodular irregularity of contour. The possibility of rheumatism or malignant disease was considered and dismissed. A thorough physical examination failed to detect any of the characteristic reflex neural symptoms of an epiphyseal osteitis.

The history of the progress and course of the ankle-joint hypertrophy, together with the evidence of a central lesion and the negative physical signs of local joint-inflammation, all confirmed the diagnosis of an arthropathy of spinal origin.

Case IV.—Dr. A. A. Y., male, æt. 65, resident of Hammonton, New Jersey. Examined the patient with Dr. S. Weir Mitchell on January 16, 1885. For the substance of the following notes I am indebted to Dr. Woodnutt.

History of Patient.—Family history excellent. He had always been strong and healthy during youth and up to 1865, though a hard-working farmer. An army life and three years of extreme exposure prior to the close of the war found him suffering in 1865 from sharp, wandering pains in the upper and lower extremities; never noticed, however, in the articulations. Loss of power followed in the right leg. Three years later suppurative arthritis attacked the metatarso-phalangeal articulation of the right great toe and last phalanx of left ring-finger, sequestra coming away in each instance.

During 1870 the patient first noticed an œdematous swelling of the right elbow; following shortly upon this the wrist-joint of the same arm gradually and painlessly enlarged. Then a distention of the capsule of the right knee-joint succeeded. The enlargement of the latter articulation was more rapid than either the wrist or elbow. Rheumatic pains in the joints accompanied the swelling and deformity.

The left limb has been comparatively exempt from pain. Recently, however, the capsule of the knee-joint has become distended and elastic. The elbow-tumor has diminished somewhat in circumference during the past four years.

During the past year the distal phalanx of the right index finger has gradually atrophied, without inflammation, and is entirely wanting. The nail and finger-end are normal, though somewhat shortened. Pain at present is chiefly in both feet, paroxysmal and erratic, often attacking corresponding points on the legs.

The present appearance of the right elbow and left knee-joint enlargements exhibits an irregular, nodulated hypertrophy bearing no resemblance to normal joint-outline, and consisting chiefly of osteophytes and abnormal increase of synovial fluid. Motion preternaturally free in all directions; structure of joints apparently entirely destroyed.

Remarks.—The joint-lesions first appeared in this patient after ataxia had become established. The appearance of the affected elbow and knee is that of an enormous nodular hypertrophied mass of bone, doubling their normal circumference, associated with synovial distention of the capsule. Osteophytes readily movable within the capsule, and varying in size from a pigeon's egg to that of a turkey.

The atrophy of the distal phalanx of the right index finger is especially to be noted, it being the first instance of complete absorption of the diaphysis of bone that I have had an opportunity of observing.

Case V.—W. H. McC., male, æt. 38, married. Admitted to the Orthopædic Dispensary of the University Hospital in July, 1883.

Hereditary history excellent; no evidence could be obtained of articular disease, rheumatism, or phthisis in any member of his family. He presented at date of examination the appearance of a healthy, well-nourished man. Has always worked industriously at his trade of plumber. A moderate drinker. He had constitutional evidence of syphilis, following a chancre contracted in 1863.

The patient attributes the present enlargement of the right ankle-joint to an injury received while working in a cramped position. Following this strain the ankle became suddenly discolored and swollen, bursting the buttons from his shoes. He was incapacitated for work during the succeeding four days; at the end of a week the discoloration and swelling had about disappeared. His attention was then first directed to a bony enlargement of the right ankle-joint. This slowly and painlessly increased in size without any appreciable interference in locomotion. At present examination the enlargement resembles a simple hypertrophy of the lower epiphyses of the tibia and fibula. The outline of the joint is globular, with slight elasticity of capsule. No pain or reflex muscular spasm.

Record of Spinal Symptoms.—Complains of darting pains about hips. Has difficulty in walking at night; sways with closed eyes. Complete absence of patellar reflex on both sides. Dr. Horatio C. Wood saw him with me in October of 1883, and pronounced him ataxic.

Remarks.—This case presents an ar-

thropathy that apparently followed a direct traumatism to the affected limb. From careful interrogation I determined that the acute swelling and ecchymosis resulted from rupture of a varicose vein, inasmuch as these were numerous and greatly engorged about the affected ankle. This first attracted his attention to the ankle, the deeper bony growth being detected when the active symptoms of subcutaneous swelling had subsided.

The hypertrophy of the joint has increased the circumference four and a half inches over its fellow.

Case VI.—A specimen of shoulder-joint arthropathy, lately removed at an autopsy held upon the body of a well-marked ataxic, has been referred to me by Dr. S. Weir Mitchell to embody in this report. The joint had become suddenly and painlessly enlarged in the later stages of the central lesion. It presented ante-mortem all the characteristic symptoms of a tabetic arthropathy: distention of the capsule, abnormal mobility, and the presence of osteophytes. The joint, upon examination, presented the following:

1st. Cartilage covering head of humerus eroded; that upon glenoid cavity irregularly thickened.

2d. Anterior margin of glenoid cavity worn away, allowing the head of bone to rest in position of forward dislocation.

3d. Osteophytes abundant about junction of capsule with anatomical neck. Marked relaxation of ligamentous structures and distention of capsule.

4th. General hypertrophy of epiphysis, somewhat nodular at margins. Evidences of hydrarthrosis.

The practical deductions to be drawn from a clinical study of the above somewhat anomalous cases may be briefly summarized as follows:

Period of Development.—1st. The tabetic arthropathies may occur independently, or precede the active symptoms of locomotor ataxia.

2d. They occasionally develop suddenly, late in the course of a posterior spinal sclerosis.

Nature of Lesions.—The peripheral expression of central nerve-irritation is characterized by the following changes found in the structure of the various articulations.

1st. A chronic asthenic hyperæmia of the synovial membranes; a hydrarthrosis.

2d. An interstitial atrophy of the epiphyses.

3d. A fungous or rarefying epiphyseal hypertrophy.

4th. The formation of osteophytes and bony stalactites.

These various joint-expressions characteristic of the spinal arthropathies may exist separately, but are usually combined in the same subject.

Differential Diagnosis.—They may be readily distinguished from the common inflammatory lesions of the epiphyses by the total absence of the reflex neural phenomena,—*i.e.*, of pain, both reflex and local, the apprehensive state regarding joint-movements, and the reflex or tetanic spasm of the muscles always associated with joint-arthritis. Abscess is never directly associated with the arthropathies, unless incident upon direct traumatism.

They are more difficult to differentiate from malignant disease of the articulations, but a careful inquiry into the history and course of the lesion, and the presence or absence of central disturbance, are our most reliable guides.

Course.—The progress of the arthropathies is essentially chronic. Occurring early, not infrequently in the history of the tabetic lesion they slowly increase, with occasional exacerbations, and years elapse before fully matured. A rapidly developing arthropathy may be associated with the later stages of an ataxia. Their course is self-limiting, though never reparative.

REPORT ON MEDICAL CHEMISTRY.

BY WILLIAM H. GREENE, M.D.

An Improved Method for the Estimation of the Alkaline Metals in Urine is proposed by Th. Lehmann. Neubauer's method of precipitating the urine by baryta solution before evaporation allows the possibility of loss both in the precipitation and the burning. Lehmann takes a quantity of urine depending on its specific gravity; one hundred cubic centimetres if the specific gravity be lower than 1020, or fifty cubic centimetres if it be above this, are introduced into a platinum capsule and treated with three or four grammes of ammonium sulphate. The mixture is evaporated to dryness on a water-bath, and then heated to complete ignition. The operation is not as delicate

as that with the urine alone, and there is no danger that any of the alkaline sulphate may be volatilized by the high temperature. If the ash is not perfectly white, a few drops of sulphuric acid are added, and the mass is again heated to expel the excess of acid. The ash is then dissolved in hot dilute hydrochloric acid, and the solution is filtered, the filtrate and washings being treated with baryta-water until the reaction is alkaline, and the analysis is finished in the usual manner.

To avoid loss of potassio-platinic chloride by the dissolving action of the slight excess of hydrochloric acid always present in platinum chloride, Lehmann recommends that the mixture of potassium and sodium chlorides shall be evaporated to dryness on a water-bath after the addition of the platinum chloride. The residue is then treated with a little water, and the mixture is evaporated to a syrup; ninety-five-per-cent. alcohol is then added, and the crystalline precipitate is washed in the capsule until the alcoholic washings become colorless. All of the washings are poured through the filter, and the deposit is then washed out, the last particles being removed by the aid of small strips of filter-paper which have previously been dried at 100° and weighed with the tared filter.

Xanthin, Hypoxanthin, and Guanin.—The proportion of xanthin in the urine of children is found by Baginsky to be increased in acute inflammation of the kidneys, the percentage being from 0.0113 to 0.0285, while the normal varies from 0.0028 to 0.003.

In fresh-beef pancreas the same author found 0.2797 per cent. of guanin, 0.1145 of xanthin, and 0.1281 of hypoxanthin; but after putrefaction out of contact with air these percentages had fallen to 0.0069, 0.0455, and 0.081, hypoxanthin best resisting the decomposition. No harmful action on the animal organism appears to be exerted by the administration of these bodies.

The separation of hypoxanthin and guanin by solution in ammonia, in which guanin is only slightly soluble, is impeded by the presence of foreign substances, especially peptones. For this reason Kossel precipitates both bodies by an ammoniacal silver solution, and crystallizes the mixture from hot nitric acid in presence of urea. The separation by ammonia can then be accomplished after the removal of the silver, which is best made by hydrogen sulphide. There is a loss of about 5.5 per cent. of guanin by this method, as a part of that substance is thrown down with the xanthin-silver compound, and still another portion is oxidized to xanthin by the nitric acid.

Detection of Quinine, Narcotine, and Morphine.—Vogel's test, which consists in the addition of bromine-water, potassium ferrocyanide, and borax, enables the detection of quinine in a dilution of one-sixty-thousandth, the reaction producing a red color. Arnold Eiolart states that if mercuric cyanide be substituted for the ferrocyanide, and calcium carbonate for the borax, the delicacy of the reaction is so much increased that one-five-hundred-thousandth of quinine becomes evident. The red color produced by heating a quinine solution with bromine-water is produced by one-fifteen-thousandth, but by adding calcium carbonate before the bromine-water it is developed by one-fifty-thousandth. A concentrated solution of quinine becomes, under these circumstances, violet in the cold and blue when heated, but an excess of bromine restores the violet color. If a neutral quinine solution is mixed with an excess of bromine and boiled until the excess is expelled, a beautiful green fluorescence occurs on cooling, and endures a dilution to one-fifty-thousandth of quinine.

If a small excess of bromine be added to a hydrochloric acid solution of narcotine, and the liquid be neutralized with calcium carbonate, it becomes red; more than one-thousandth of narcotine in the solution produces, however, a violet or blue color. Acetic and tartaric acids diminish the intensity of the coloration.

When a morphine solution is heated after the addition of bromine and calcium carbonate, the red color is produced if one-twelve-thousandth of the alkaloid be present. A greater dilution gives an orange or brown tint. Strychnine, cinchonine, and caffeine give no characteristic reaction with bromine-water and calcium carbonate.

A Glucoside resembling Digitaline in its physiological properties has been extracted by E. Harnack from an arrow-poison of Africa. This substance is soluble in alcohol, and is precipitated in flakes on the dilution of its solution by water. It dissolves freely in acidulated

water, like some of the non-nitrogenized glucosides which are not readily soluble in alcohol, but is insoluble in ether. It is precipitated from its acid solution by tannin and by the phospho-tungstic solution. By boiling with hydrochloric acid it yields a resinous body whose physiological action is like that of digitaline.

Ptomaines in Human Cadavers.—Breiger has continued his investigations of the basic products of animal decomposition, and has examined the extracts of the internal organs of bodies that had been kept in a cool cellar for twenty-four or forty-eight hours. The organs were finely hashed and extracted with water, enough hydrochloric acid being added to give the whole a feeble acid reaction. The mixture was heated to boiling and filtered hot; the filtrate was evaporated on a water-bath, care being taken that the reaction still remained acid. The thick syrup was extracted with alcohol, and the alcoholic solution treated with platinum chloride, which threw down an abundant precipitate. This was dried and exhausted with water. The insoluble residue consisted principally of potassio-platinic chloride, while the readily soluble platinum salt was recognized as the double compound of platinum and cholin, of which the nature was still further verified by decomposition with hydrogen sulphide and conversion into the gold salt. That the cholin existed already formed in the organs operated on, and was not a decomposition-product of lecithine, was proved by the fact that an organ as rich in lecithin as the brain yields no cholin when long boiled with two-per-cent. hydrochloric acid, although neurin is then obtained in abundance. Only by the continued action of concentrated hydrochloric acid does lecithin yield cholin. In these experiments no other basic product could be obtained from the cadavers.

When the decomposition is further advanced, poisonous products appear to be formed. In one case the organs of a body which had been preserved four days yielded an alcoholic extract which produced in dogs and guinea-pigs the symptoms of muscarin, and the proportion of platinum in the platinum double salt corresponded closely with that required by muscarin. Whether the substance is really muscarin, and whether still other poisonous bases are produced during the decomposition of the human organs, Breiger reserves for further study.

The Origin of Fibrin.—William H. Howell has reviewed the work and theories of Schmidt and Hammarsten on the coagulation of blood, and has repeated the experiments of the latter with confirmatory results. According to Hammarsten, fibrin is produced from fibrinogen by the action of a ferment developed in the serum of the blood. Howell's experiments were made with the blood of terrapin. This was drawn directly from the pulmonary artery into a cylinder packed in ice, and was allowed to stand from twenty-four to forty-eight hours, after which the clear plasma was drawn off with a pipette. This may then be kept for several days in a warm room without coagulating, but clots in a few minutes when mixed with a little clear serum from a clot of colorless plasma, affording an "interesting proof that the ferment is formed by the breaking down of the white corpuscles, and that the fibrinogen exists preformed in the plasma." The clear plasma was filtered and treated with an equal bulk of saturated sodium-chloride solution, and the precipitated fibrin was collected on a filter, pressed, and still further purified by treatment with a solution of salt. It was then dissolved in water and an almost clear solution obtained.

The ferment was prepared by Schmidt's method of precipitating serum with alcohol. The solutions did not become opalescent when heated to 80° C., and in most cases remained clear even on boiling, showing that no paraglobulin was present. When the solution of this ferment was added to the pure fibrinogen, a firm, colorless clot was formed in from ten minutes to an hour at ordinary temperatures.

The fibrinogen obtained by Howell from terrapin's blood differed from that obtained by Hammarsten from the blood of mammals in being completely precipitated from its solutions by heating to 56–60° C., and the filtrate gave no opalescence when boiled, and no reaction with the xanthoproteic test. On the other hand, Hammarsten's fibrinogen was only partially coagulated by heating to 60°, a small portion of the original fibrinogen still existing in the solution as a new globulin, coagulating at 64–66°. Howell finds also that the fibrinogen from hydrocele liquids which are not spontaneously coagulable is completely precipitated at 60°.

When a solution of fibrinogen from the blood of terrapin is caused to coagulate by the ferment, and the fibrin is removed as rapidly as it is formed, so that none of it may dissolve, only a portion of the fibrinogen is converted into fibrin, the remainder staying in the solution as a new globulin, coagulating not at 64–66°, but between 75 and 80°.

It was found that five minutes' heating to 70° impaired the activity of the ferment, but did not destroy it; five minutes' heating to 80° destroyed its power entirely, yet a small clot can be obtained with fibrinogen when the ferment has for one or two minutes been heated to 100°.

H. G. Beyer has published a paper on THE ACTION OF CARBOLIC ACID, ATROPIA, AND CONVALLARIA ON THE HEART. His conclusions are that the depressant and paralyzing action of phenol on the heart can be much diminished and even held at bay by a free supply of oxygenated blood, thus showing the importance of respiratory activity in cases of phenol-poisoning where there is danger of death from failure of the heart's action.

The influence of atropia depends on the amount of work done by the heart; when this work does not exceed the normal, atropia produces only a slight stimulation; but when the muscular tone of the heart is lowered, the stimulating action of atropia is powerful. When the heart had been poisoned by phenol, atropia was found to increase its rate and its work, and a more rapid recovery from the effects of the phenol took place under the influence of atropia.

The experiments made with convallamarin showed that small doses slightly increased the pulse-rate and the work done, finally arresting both auricles and ventricles in systole. Medium doses or frequent small doses first increase the rate but diminish the work, while large doses paralyze the heart in a short time, arresting it at any point between systole and diastole.

THE POISONOUS ACTION OF HYDROGEN SULPHIDE has been studied by G. Smirnow, who finds that one-tenth per cent. of this gas mixed with the air causes no notable poisonous effects; one-third of one per cent. proved rapidly fatal to dogs. Saturated hydrogen-sulphide water introduced into the stomach of dogs increased the tissue-waste, as shown by the increased proportion of urea, sulphuric acid, and phosphoric acid in the urine. It was not found to produce any effect on the activity of the gastric and pancreatic juices.

ON THE INTENSITY OF THE RESPIRATION - PHENOMENA IN AN ATMOSPHERE RICH IN OXYGEN. — Saint-Martin has made some experiments on the old question of the influence of the proportion of oxygen in the air to the intensity of respiration, and his figures, given in the following table, seem to confirm the older opinion that this proportion is of little importance. The first four experiments were on guinea-pigs, the last four on rats.

Percentage of oxygen in the air.	Temperature of the air. Degrees C.	Carbon dioxide exhaled per hour. c.c.	Oxygen absorbed per hour. c.c.	$\frac{CO^2}{O^2}$
20.9	18.5	515	570.4	0.89
50–66	18.1	513	583	0.87
20.9	13.1	598	660	0.91
40	13.2	613	670	0.91
55	12.3	506	536.5	0.94
20.9	12.4	525	514	1.02
75	9	535	586	0.91
20.9	9.1	551	569	0.97

A long series of experiments by Lukjanow has led him to the same conclusions as those deduced from those of Saint-Martin.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF CHARLES K. MILLS, M.D.,

Neurologist to the Philadelphia Hospital, Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic, etc.

Reported by WILLIAM H. MORRISON, M.D.

A CASE OF NYMPHOMANIA, WITH HYSTERO-EPILEPSY AND PECULIAR MENTAL PERVERSIONS—THE RESULTS OF CLITORIDECTOMY AND OOPHORECTOMY—THE PATIENT'S HISTORY AS TOLD BY HER-SELF.

GENTLEMEN,—I have brought this patient before you for a few minutes in order that you may note her appearance. She is 29 years of age, and has suffered for a number of years from a form of nervous or mental trouble, and has had at times hystero-epileptic and hystero-cataleptic attacks. She has had certain surgical operations performed, of the results of which I shall speak later. I shall now ask her to go out while we discuss her case. It is with some hesitancy that I have made up my mind in regard to lecturing on this patient, but the subject is one of such extreme importance and interest that I have

decided to do so. [The patient left the room.]

This is a case of nymphomania. I hold in my hand the history of the case prepared by the patient herself, which I shall read. It is not only an interesting story, but pathetic and almost dramatic in some of its details.

The woman came to me nearly two years ago at the Polyclinic, with a note from a physician. She wished me to send her to an insane hospital, and implored me to put my name to a certificate of insanity. This I refused to do, but I inquired into her case, put her on some medicinal treatment, encouraged her, and had her come to the Polyclinic from time to time. She left the city to live with some relatives, but they were unable to keep her, or she would not stay. She then returned to this city, with other relatives, and here also she was a burden to herself and every one else. She again came and asked me to send her somewhere. Finally, I told her that I would try to get her into the nervous wards of this hospital. At first she refused to come here. I, however, gave her a note, which after some time she used.

I shall now read her history as prepared by herself. It is to me, and I doubt not that it will be to all students of the nervous system, a highly interesting recital.

I inherit from my mother a morbid disposition, from my father an opposite temperament. My nature is made up of contradictory elements. The receptive capacity of my brain and power of mental action have always exceeded my power for physical action. Before I was six years old my sexual feelings were aroused by intercourse with children. My general health was good until I was twelve. Then came a change of mental condition. I was taken from school. Soon after I was told, by one who taught me to do wrong, that if any man knew of it he wouldn't marry me. I did not know what it meant, and was ashamed to ask any one. Menstruation commenced in the same year, but I was taught nothing of the laws of my being. I lived twenty-two years before I knew how I came into the world. I was guilty of immorality when I did not know what it meant. My girlhood was spent in brooding over what I could not understand. I shrank away from men, and hid my impurity from every one. At twelve years of age I commenced to feel an irritation in the vagina and about the neck of the uterus. Years after there was found some cause for this, when an examination was made, but whether there was naturally an abnormal development, and puberty bringing the organs into action also brought friction, which was the *cause* of my trouble, or whether it was the *result* of masturbating, can never be known. I did not know that an orgasm could be produced by masturbation. I handled myself to quiet the excitement. Gradually my nervous system became affected. The first symptom was starting and crying out at sudden sounds. Then I became subject to sudden depressions of vitality and spirits, which I generally regained after the appetite had been satisfied. Getting into a bath or merely washing the parts would often bring it on. Then the weakness began to settle in the nerve-centres of different organs,—first the heart, then the uterus and brain, causing pain and a kind of stoppage in their regular action. Hysteria was the result. When the heart was affected, I had pain and partial loss of power in the left arm. Once the shock from a terrible noise took power and feeling from both arms. At first the spells were merely weakness. I cried or laughed or screamed. It is two or three years since they first took the form of spasms.

My first treatment was medicine to try to strengthen my nerves. The personal influence of my doctor induced me to exert my will, but any good effect was but temporary. If I succeeded in resisting temptation to do wrong, the orgasms would take place without my volition,—that is, my will was so determined not to have anything to do with it—I forced myself into such a rigid state of self-control—that mind and body seemed to separate and the latter would act independently, while *I* seemed to be some other person, deprived of all power except consciousness. Or they came on with involuntary contractions of the muscles of the parts, the vibrations running up the spine to the brain and shaking every nerve in my body.

I had at one time slight ulceration and inflammation and falling of the uterus.

The next thing tried was cutting the clitoris, —extirpation it was called; but it grew again, so that other doctors scarcely believed it had been cut. Perhaps the manner in which it was treated had something to do with this. The parts were drawn together and sewed, while the second time it was done they were stretched apart until they healed. The relief from this lasted only six weeks.

At times I was almost crazy from worrying because I could find no relief. I tormented the doctors to operate again, but they were afraid it would kill me. Once I took an overdose of medicine, hoping it would kill me. I would have taken my own life, but kept hoping to persuade some one to operate. At times I felt tempted to seek the company of men to gratify my passion, but was too modest and held my head too high to put the desire into action. I held myself above anything that looked "fast," and never soiled my lips with unclean conversation.

In 1881 I entered a hospital. I was examined, but it was decided not to operate, but to give me strengthening treatment. I had not been educated as I wanted. I had earned my living by labor that occupied my hands, while my mind ambitiously dreamed of work that I would have to climb to. When I entered the hospital I decided that my vocation was to study the care of the sick. When I was given work to do I put my heart in it. In the seven months that I spent there, happy and living up to my highest intelligence, I was not once troubled with the nymphomania; but when I had to give it up and go away, crushed with disappointment, with weakness and poverty shutting out hope of attaining what I desired, —when I had again to spend my days in work that held no interest for me,—the old morbid depression came back, and with it the disease. I have also noticed that when my affections are aroused it counteracts animal passion. I could never love a man because he was a man. My tendency is to worship the good I find in friends. I feel just the same towards those of my own sex. If they show any regard for me, the touch of a hand has power to take away all morbid feeling.

Twice I had an outbreak of disease in the glands of the axilla,—swelling and lumps like blind boils. I was subject also to an intense itching—peculiar to an anæmic condition—about the throat and wrists. At times after passing urine I felt as if part of my life had been drained away with it.

When I began to read the physiology of the nervous system, and of experiments that had been demonstrated on animals, it was revealed to me that what was needed was to cut some connection of the uterus with the spinal cord. I explained my theory to one of the physicians of the hospital, where I again went for examination. A consultation was held. Both ovaries were found to be enlarged, the right one the most. It was decided that the only thing practicable was to remove them, as a questionable experiment. This operation was performed. Subsequently I was threatened with peritonitis. The inner part of the walls had grown together, when an abscess formed in the wound. Trying to lie in one position set me wild. I had to be kept under the influence of morphia, which was found injurious and discontinued. For weeks I had spells of nervous excitement. If I fell asleep I would waken moaning and crying. I had to be drugged to keep me quiet. It is supposed that the prostrating effect of those medicines on my brain had much to do with its subsequent continued condition of partial volitionary paralysis. After the wound began to heal I experienced what I suppose to be the feeling of a dipsomaniac when suddenly deprived of alcohol. My whole nervous system was craving the stimulation it was accustomed to. The clitoris was so sensitive that it made me twist all about. Another consultation was held, and it was thought it would be best to cut it away. This was done seven or eight weeks after the öophorectomy.

Since the removal of the ovaries I have been able to control the desire when awake, but at times in my sleep I can feel something like an orgasm taking place. My experience leads me to say that my cure (?) is not due to the absence of the ovaries: there is no diminution of sexual feeling. There would be as much excitement of the parts if the clitoris were still there. If my will gave way I would be as bad as ever; but the operation necessitated the cutting of some nerve or nerves which transmitted sensation from the sexual parts to the spinal cord, thus involving the brain in the general excitement and overpowering the action of the will. Since this cutting there has been a separation, so that when there is excitement it travels only as far as where the separation exists and then passes off. The spine and brain are not affected by it, and my will can rule when awake. My condition while asleep is the same as before I was operated on. I have been told that it is beyond the reach of human knowledge to explain this matter; but I am positive that that is the way in which the cure was effected.

Menstruation had always been irregular, at times attended with congestion, so that I have had cramps as long as twelve days before the flow would come on. It was nearly time when I was operated on, and it came on the third day after. Nearly eight months after there was a slight flow for three days. A week previously I had a congestive chill and pain during that time. At times since I have had a simulation of all conditions during menstruation, so real that I was surprised to find no show. I have been subject to flushes of heat since losing the menses. I have had intense pain in two spots where I suppose the inside cuts were made and in the cicatrix, but no cause could be found on examination. I have had congestion of brain, and have had nervous chills with pulse and respiration affected, so that my blood seemed to be under no control, but whirred around, producing a sensation like an electric battery gives all over me. I have had spells of catalepsy which lasted several hours; I happened to be in one when it was time for my temperature to be taken. It was about normal before and after, but while in that condition marked 101°. I have been sitting on a chair when the power to retain an upright position would leave me; I would have to slip down and lie on the floor until I felt strength to get up. I have tried to walk when too weak and have been struck motionless; I had not volition enough to move my feet: if any one came to help me, they dragged after me. If left alone, my grasp would relax from any support and I would drop to the floor.

In all my attacks my mind is like that of

some persons who have been supposed to be dead and afterwards have told that they knew all that went on, yet, even if the coffin-lid was screwed down, had not power to prevent it. My spasms commence with pain in back of head, as if a strong hand had a grasp there and I was struggling to get loose. I twist about and grip with my hands so that no one can loosen them; my limbs extend and grow rigid. I appear to be holding my breath, and turn black in the face, because there is stricture and oppression of heart and lungs; the muscles of the throat contract and make noises; I lose power of speech; I have facial spasms. I never fall like epileptics, but have to lie down. Shocks and counter-irritation fail to break these spasms, but serve to intensify my sufferings.

Within the last three months the cerebral symptoms have diffused through the cord. I have intense pain that settles in spots; I scream and become hysterical because the physical power to bear pain is gone. These attacks, although as severe as the others, do not have as injurious an effect as when settled in the brain; do not have the jarring in my head that makes me feel so bad after a spasm; my condition is more natural. I cannot lie straightened out. In one spell the cord contracted and drew my head back and down towards my heels, so that I was in the shape of a bow. Sometimes the lower limbs are in constant motion. I have only partial use of my brain, sometimes none at all. This applies not only to disagreeable exertion, but to what would add to my own pleasure. When I reach the point where I feel that I must stop what I am engaged in, I could not go on for any consideration. When weak, I cannot walk in a straight line.

Mental Aspect of the Case.—When I asked to be sent to an insane hospital, it was because I have been at times an irresponsible being. My mind is sane, but my actions are insane, because the physical power of self-control is gone. This condition comes on from extreme weakness or from being excited by aggressive treatment. When my head is too full of blood I am half delirious. The symptoms are talking like persons do who have been etherized, laughing, singing, restless walking, staring eyes in incessant motion. Music has a peculiar effect on me when I am weak. I have been sitting, listening to my brother playing, and have felt like springing at his throat; I would have to leave the room. I have felt like getting out of bed to go around and shake my family in their sleep; I would put a wet towel on my head to prevent it. In such impulses I have no desire to harm any one or to destroy anything, but feel as if it would relieve the tension of my nerves. When I feel pretty well and no one worries me, there is no insanity about me.

I will also record here a case of what Huxley calls a delusion of judgment. On two occasions when I had cried until I felt as if my brain was drained of all strength, I felt a sensation as if some one were holding ether under my nose; I struggled just as I do when it is given to me; I opened the window to let the air blow in my face, but I still smelled and tasted it; it went into my stomach and turned me sick. I did not vomit, but belched up wind, which brought the ether-taste with it, just as I have done when coming to. This was two hours before dinner; I thought that after I ate something the sickness would leave me, but it did not for several hours after. I did not imagine that there was ether near me. I knew that there was none.

Since writing this I have had an argument with a person who, without any temptation or experience, asserts that the grace of God would take the place of alcohol to a dipsomaniac. That disease differs from mine inasmuch as the appetite cannot be satisfied without taking something into the mouth,—contractions of the throat could not do it,—while in my case the appetite would satisfy itself without me doing anything. I can testify, however, that at first, when I felt tempted, I would kneel and honestly pray to be kept from doing wrong, and then get up and do it; not because I wanted to, but because my life could not go on until the excitement was quieted. Later on, when the orgasms took place of themselves, I would resolve to stay on my knees until I got over it, and while I was praying my body was so contorted with the disease that I could not get away from it even while seeking God's help.

As you see from this history, the patient is a rather well educated woman. Her familiarity with medical terms is to be explained by the facts that she was educated as a trained nurse, and that she has also read much in reference to the nervous condition from which she suffers. I am in the habit of encouraging intelligent patients with nervous diseases to write out their histories in detail. By so doing, often much more light is thrown upon the case than by an ordinary study.

I have a few comments to make upon this history. First, in reference to the early age at which this sexual inclination occurred. The patient admits that as early as six years of age, and perhaps even younger, she had inclinations of that kind, which were gratified in a morbid way by allowing other children to handle her. This is interesting in reference to certain practical matters, such as operation and treatment; and also with reference to what is at

the basis of conditions of this kind. I have observed evidences of sexual excitement in children as young as from two to four years of age. I remember seeing, some twelve years ago, a girl between four and five years of age, who had marked evidences of sexual excitement, and who was in the habit of getting into all sorts of extraordinary positions to accomplish a species of abnormal masturbation. Nothing that could be done in that case seemed to have any effect. Evidences of this kind are more frequently observed in young boys than in young girls. In these cases circumcision, or some other operation on the prepuce, is performed with the idea that the symptoms will be relieved by the operation. I have had the operation performed in my own practice; and in hospital and private practice I have seen from twenty-five to fifty of these operations. My experience is that circumcision, and breaking up of adhesions and removal of local irritation, will do a certain amount of good, but that, as a rule, these procedures do not entirely cure these cases, and in some instances they appear to do but little good. It is, however, good practice to remove all peripheral irritation. This goes to show that the condition which causes the symptoms in many of these cases is some defect or change in the nervous system of the individual which cannot be removed by mere operation, and is only partially benefited by such treatment.

This patient, as you have heard, has been subjected to clitoridectomy. This operation was proposed and performed by Dr. Bedford Brown, who made it somewhat famous or notorious, and got himself into trouble with the English medical profession by performing it, and, if I remember aright, he was expelled from some of the societies for resorting to this operation so frequently as he did. In the present day such would probably not have been the result, for the tendency is now to operate on anything and everything for the relief of nervous conditions. In this case, as the patient says, the first operation was not complete, but on the second occasion the clitoris was entirely removed.

With regard to her statements in reference to the effect of work, I have no doubt that there is some truth in them. Our experience with this patient has shown us that if she can be occupied mentally and physically she is better than at any other time. She is, however, one of those unfortunate individuals who, while benefited to a certain extent by occupation, are incapable of working steadily as others do. She works by fits and starts, as the fancy suits her. It is impracticable to put her at any special work or give her any definite duties to perform, for she could not be relied on in special time of need.

She states that since the removal of the ovaries she can control the desire while awake, and has a curious theory to account for this, some of the inconsistencies of which are quite apparent. I have questioned her closely as regards this statement, and I think it may be accepted as true.

It is supposed by those who have seen her in the attacks which she has described that there is a certain amount of malingering; and in these cases it is difficult to distinguish between an absolute inability to will and malingering. Her description is a good one of the epileptoid variety of hystero-epilepsy. She has the peculiar difficult respiration, some irregular spasms, and some curious volitional conditions, but not the well-marked phases of a distinct and complete hystero-epileptic attack.

In conclusion, I wish to say a few words as to this case, its nature and probable outcome. There are certain varieties of nymphomania, and nymphomania itself is often confounded with erotomania. Nymphomania in the female or satyriasis in the male is a condition in which there is extreme and abnormal excitement of the sexual passion. It is a genesic, organic feeling, rather than a condition associated with the sentiment of love.

Hammond, in his recent work, treats of it under the head of acute mania, and considers cases of nymphomania as special varieties of acute mania; and undoubtedly this is the correct way of looking at the subject in a large number of cases. In man the corresponding mental and nervous condition often leads to the commission of rape and murder. This is more likely to be the result in man on account of his aggressive nature.

In woman, as in this case, the affection is more likely to show itself with certain collateral conditions, as spasms, hystero-epileptic and cataleptic conditions, with screaming, crying, and violent hysterical attacks of various kinds. In this patient there is, as you have heard, a tendency to

impulsive acts, but this has not gone so far as to lead to violence.

Although a nymphomaniac, her intelligence and education have enabled her to resist her passions better than is the case among the uneducated. I have seen a number of nymphomaniacs in this hospital. I recall one in the case of an epileptic and also hysterical girl who was in the nervous wards of this institution for a number of years and finally died in an insane hospital. This was a case of hystero-epilepsy with separate crises. She had violent, true epileptic seizures and at other times had attacks of a truly hysteroidal character. She was a nymphomaniac, and had to be constantly watched. She would make indecent proposals to almost any one, and would masturbate and expose herself openly. She also had occasional maniacal attacks, and a few months ago she passed into an insane hospital and died there.

There is a form of insanity, an emotional monomania, called erotomania. Nymphomania and erotomania are sometimes not differentiated in practice, and in some books the distinction is not made. They are, however, really different conditions. Erotomania and nymphomania may be associated in the same case, but I think it more likely that erotomania will not be present in a case of nymphomania. Erotomania may exist as a special symptom or it may be one of the evidences of monomania. It is found in both men and women. Patients with this condition may have no sexual feeling whatever. The individual has some real or imaginary person to love. This is a platonic, sentimental, or affected love, and it may be for a person of the same or of the opposite sex. It is rather the emotion of love which is affected, not the sexual appetite as in the present case. It is shown rather by watching or following the footsteps of the individual, by writing letters and seeking interviews. In the history of Guiteau an incident of this kind is mentioned, I think only by Beard. It was known at one time that he followed a lady in New York whom he supposed to be the daughter of a millionaire,—followed her, watched her house and carriage, and wrote letters to her. At another time, out West, he showed the same attentions to another lady. He went to the house, but was kicked out. Many of the great singers have been followed in this way.

Some time ago I examined a man condemned to be hanged. I saw him within twenty-four hours of his death. He was rather good looking, but thought that he was much better looking than he really was. He was an erotomaniac, whatever else he may have been. In the shadow of the gallows he told me with much interest of a certain lady in the town who had visited him and was in love with him, and how all the women in the neighborhood were in love with him. A letter was shown to me which he had written to one of these ladies. He had various pictures of females cut from circus-posters hung in his cell, and he even adored these. He had many of the developments of erotomania; but during my visit he made no indecent or profane remarks.

Let me next say a few words in regard to prognosis. The prognosis is not hopeful as to perfect cure. These cases are, I believe, intrinsically nervous or mental in their nature, and therefore I believe that operative procedures, as öophorectomy and clitoridectomy, will not radically cure the patient. In justice to those who believe in these operations, it might be said that this girl has been better since these operations have been performed. She has been better as respects masturbation, but she has had the same nervous manifestations. It is possible that by some less serious procedures and by suitable general treatment we could have accomplished as good a result.

The only thing to be done in the way of treatment is to treat such a case as any other cerebro-spinal or general nervous defect. Employment is exceedingly useful. The removal of any local irritation or special exciting cause will be of service. The time to do most good in these cases is in infancy, childhood, and youth. At this time we should by moral and intellectual development endeavor to eradicate as far as possible the tendency in the wrong direction. When we come to nymphomania, accompanied or not by hystero-epileptic or cataleptic symptoms, severe measures are sometimes called for, even cold bathing. I do not, however, believe in rough treatment, as is practised by some, particularly by those who do not think deeply. Such persons are apt to consider these patients as frauds; and to a certain extent they may be right. The patients may exaggerate the conditions. This tendency

is particularly apt to be brought out by aggressive treatment. It is necessary to use a combination of firmness with judgment, moderation, and kindness in the treatment of conditions of this kind. Although severe treatment may cause improvement at first, such treatment usually recoils upon itself. Just as an insane man may suppress his delusion when subjected to harsh treatment, so these cases may be apparently benefited at first. It is only the educational treatment, the moral treatment, the treatment of local conditions, and the general building treatment that will accomplish permanent good.

As to the question of operating, I am not prepared to speak positively. I have seen cases which have been relieved, but I have never seen a case in which these operations exerted a clear and absolute curative effect, and we should not expect this, for the simple reason that we cannot restore an impaired or imperfect nervous system by removal of the clitoris or ovaries.

TRANSLATIONS.

Physiological Effects of Boldo.—Although boldo has been in use in France for a decade as a tonic and hepatic stimulant, it has not attained a very high position in the estimation of therapeutists, probably because we are in possession of other drugs which satisfactorily answer the purpose for which it has been used. Recently, however, new properties have been ascribed to it. M. Laborde, at the Société de Biologie (February 28), declared that boldo was decidedly hypnotic, producing also a certain amount of anæsthesia both of the general organs and special senses. In toxic doses it kills by arresting the action of the heart. It excites the hepatic and renal secretions, and is discharged principally by the kidneys. Ten to fifteen grammes is sufficient to kill a dog of ten to twelve kilogrammes. The alkaloid (boldine?) is quite rare, and is very poisonous.—*Le Progrès Médical.*

For Eczema of the Genitals.—

℞ Potassii chloratis, 1.50 gm.;
Vini opii, 2.50 gm.;
Aquæ puræ, 1 litre. M.

Apply on a compress. To be preceded by a warm sitz-bath or by mild cataplasms if there is a certain degree of attendant inflammation.—*La France Médicale.*

Results of Larynx-Extirpation.—From a review of all the cases thus far reported of extirpation of the larynx, seventy in all, Zesas (*Archiv für Klinische Chirurgie*, B. xxx.) concludes that the operation might produce better results if the patients would come under treatment earlier. Five patients with sarcoma were operated upon, with three deaths; of sixty with carcinoma, forty-two died, fifteen recovered, three did not report the result. Of syphilitic stenosis, perichondritis, and tubercular new growth one case of each presented themselves, and all died, while one with polypus and one with papilloma of the larynx recovered.—*Centralblatt für Chirurgie.*

Treatment of Whooping-Cough.—Belladonna has an established reputation in pertussis, and is the principal agent in the following formula employed by Dr. Roger (*La France Médicale*). He gives a syrup of belladonna (two parts) and of valerian and digitalis (of each one part), from one to six teaspoonfuls in the twenty-four hours, according to the age and the intensity of the symptoms. For children under two years, M. Roger commences with half a drachm a day, and gradually increases the amount to two drachms daily. It can be given in milk or simply mixed with water. When it is difficult to administer in this form, he replaces the syrup by the tincture:

℞ Tr. belladonnæ, 10 parts;
Tr. valerianæ vel moschi, 5 parts;
Tr. digitalis, 5 parts. M.

Of this the aggregate quantity for an infant under two years is five drops daily, gradually increased by five drops until thirty are given in the twenty-four hours. For children from two to five years of age, ten drops may be given, and increased in the same way.

Lupus Erythematosus cured by Arsenic.—Mr. Jonathan Hutchinson reports an instance of cure of lupus erythematosus of the face cured apparently by the persistent use of arsenic continued for fifteen months.—*British Medical Journal*, p. 535.

Dr. E. T. Reichert has been appointed by the Trustees of the University of Pennsylvania to lecture for one year on physiology in the Medical Department.

PHILADELPHIA

MEDICAL TIMES.

PHILADELPHIA, APRIL 18, 1885.

EDITORIAL.

SHALL THE AMERICAN MEDICAL ASSOCIATION BE REORGANIZED?

THE meeting of the American Medical Association, which convenes in New Orleans on the 28th inst., it is expected, will in point of numbers probably fall considerably below the average attendance of the last few years. Owing to the fact that the locality selected, although possessing special advantages from other points of view, is quite remote from the geographical centre of membership, many of the delegates and older members will be prevented from attending. At the same time it is hoped that the meeting will excite an interest in medical organization and in the Association itself, and will witness the accession of many new members from that section of the country. It is to be expected, and it certainly is no reflection upon them to state the fact, that the large proportion of new members received at this meeting will be entirely unfamiliar with the routine methods of transacting the business of the Association, and therefore unable to decide intelligently important questions which may come before it for its decision, and which may seriously affect its future policy and usefulness. This condition of affairs shows an inherent weakness in the present organization of the American Medical Association which demands and should receive the earnest consideration of every member of this body. It would be possible under such circumstances for a small clique of determined and not too scrupulous men to form a ring which would very effectively rule the Association and perpetuate itself in power. If the annual meeting of the Association is merely an annual mass meeting, then we should exercise extraordinary watchfulness so as to escape the just criticism that mass-meeting methods are pursued in its management.

The Association, we believe, needs reorganizing on a plan commensurate with the great interests and responsibilities which fall to its charge, and the present time is favorable for such a change. It publishes a weekly journal, which is well established and is now a creditable publication, which requires the expenditure of thousands of dollars and has an available income for the current year estimated by the editor at twenty thousand dollars. For this journal an editor must be elected at this meeting, and in all probability a new place of publication decided upon for the current year. The Association, in the estimation of many of its members, has reached the stage of development at which it should be incorporated and have a permanent office in some large Eastern city. The journal should be published where it would be most convenient for the members, and where the greatest facilities could be provided, and we need not hesitate to say that we think that it would be advantageous, from more than one point of view, to the Association to have the periodical published in Philadelphia. As suggested by the venerable editor of the journal, with the income above named the Association could afford to have its own publication office, well supplied with type, where it could be set up, and—if the Association continued to grow—where it also would soon be able to place the presses for its publication. With $12,000 per annum to pay for the current expenses of publication, and $6000 for the editorial department, and $2000 for incidental expenses (the estimate furnished by the editor in the issue of the Association Journal for April 4), the suggestion certainly seems not only feasible, but almost imperative.

It would also appear that the time has

come for a change in the manner of conducting the meetings. The Association has increased to such an extent, and the interests connected with it have become so important, that it is desirable that its annual meetings should be held where they can be attended by the greatest number of its members. Semi-annual or quarterly meetings of the Association, or of branch Associations, could be held in different parts of the country, to keep up the interest of the profession in this representative organization, if desired. It would also aid in maintaining interest in the Association if the disabilities of permanent members were to be removed, so as to allow them to vote on all questions which may come before them affecting the welfare of the Association or of the profession. We would also suggest, if it would not be considered as presumptuous, that not only the editors of the Association journal, but also each of the other officers who are obliged to attend the meetings in their official capacity, should receive an honorarium for their valuable services.

As the inherent defects of the present methods of conducting the business of the Association have become obvious, the Association having become unwieldy owing to its remarkable growth during the past few years, it is hoped that a carefully-considered and well-matured plan of reorganization may be presented at the present meeting, and a wise and consistent course of action be devised and adopted for the future.

PUBLIC HEALTH NOTES.

IT is quite gratifying to those interested in matters affecting the health of this city—may their tribe increase!—to see how, under the pressure of a threatened epidemic, the proverbial inertia of political bodies is in a measure overcome, so that sanitary improvements become possible which under other circumstances and at other times would be demanded in vain. The spirit of our corporate rulers was shown in the action of the last Councils in passing a resolution reprimanding the chief engineer for delivering a lecture before the Philadelphia County Medical Society upon the water-supply of the city, in which he pointed out some of the defects and disadvantages of the present system and suggested means for remedying them. This precious piece of official insolence declared that the people had no right to obtain information upon health matters from those best qualified by their experience and official position to give it, and also asserted that the true policy was to keep such knowledge hidden, for fear that business interests might suffer. It appears evident that some members of Councils have a very imperfect idea of the scope of city government: they need to learn that the chief function of this great corporation is not business or money-making, but to secure the greatest good to the greatest number, and it primarily owes its reason for existence to the general desire of affording the highest attainable degree of protection to the lives, liberty, and property of all.

Public health is the first essential in material prosperity, and should occupy the first place in the minds of those chosen to compile, interpret, or execute the laws. The water-supply of Philadelphia was one of the chief concerns of the great founder of the city, and was carefully and judiciously provided for. Unfortunately, the growth of the suburbs of the city along the Schuylkill and the establishment of graveyards along its banks have in an unexpected way seriously and apparently irremediably contaminated our present water-supply. The suggestion of Col. Ludlow to select another source from which a practically unlimited supply of comparatively pure potable water can be obtained—from the Delaware River above Trenton—is one that deserves serious and immediate consideration from the city authorities, and should not be intemperately

and inconsiderately rejected. In the mean time, the plan of constructing intercepting sewers along each side of the Schuylkill, which are estimated to cost millions of dollars, and which cannot be completed for many years to come, had better be suspended, for the present at least, as the chief engineer has suggested.

The City Board of Health has begun a system of house-to-house visitation by sending twenty-five inspectors into the most crowded and dirty portions of the city, who are reported to be doing good work, and, instead of meeting much opposition, have been well received by the people who dwell in such insalubrious localities.

The street contractors are also incited to increased activity by the fact that the stereotyped report of the police force each week of "dirty streets" is finally acting in a manner which prejudices their prospects of obtaining their usual warrants for work not done and material not furnished.

While the City Board of Health is both active and efficient as far as its powers extend, we are glad to see that there is a prospect that at the present session of the State Legislature a State Board of Health will be created. Owing to the patient perseverance in well-doing of the special committee of the State Medical Society, after many failures, the bill has passed the Senate, and will probably succeed in also passing the lower house, if that august body does not exhaust all its energies in the great political game of chess now in progress, in which the future government of Philadelphia is the stake. We suggest that a supreme effort be made to secure the passage at the present session of this act, the text of which is given on another page. Such a favorable opportunity for securing a State Board of Health may not be again presented, and all who are interested in the public health and who have any influence with our representatives at Harrisburg are urged to act at once.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

ERYSIPELAS and the Antiseptic Method was recently made the subject of a lecture by Prof. Verneuil, in which he declared that "the antiseptic method, so powerful when used against contagion in general, is not so useful against erysipelas. At the same time it is certain that erysipelas is not so common as it was. In seeking the reason for this, let us first of all show that it is true that erysipelas is rare compared with what it was in former days. From 1862 to 1864, M. Gosselin had one hundred and thirty-three cases in his wards, and a mortality of thirty-one of these. Fifty were from outside and eighty-three arose in the hospital. From 1865 to 1867, M. Gosselin adopted a series of hygienic measures (such as better ventilation, separation of the patients attacked with the disease, refusal to admit cases from outside, etc.), so that in these three years he only had forty-five cases, with nine deaths. In 1872 I took charge of the service in Piété Hospital, after M. Gosselin, and found an epidemic of erysipelas raging, following the war of 1870–71. I made an effort to stop it by applying the doctrine of antisepsis to the fullest extent, employing all the Listerian methods. At the same time I allowed the cases from outside to enter, and did not keep up the separation of patients, with the following results. From 1877 to 1880, thirty cases and seven deaths,—six cases came from outside and twenty-four occurred in the hospital. In comparing these results with M. Gosselin's you will be struck with the difference, which I think that I owe to antiseptic treatment. Is it possible, therefore, to conclude that antisepsis is all-powerful? Evidently no. But if I could have separated my patients completely, no doubt it would have shown a better result. Here is the proof. I found in the three years mentioned no less than three small epidemics of erysipelas in the wards. The first was of five cases, the second and third took four cases, so that I should have had but twenty in all were it not for these outbreaks. Last year, from September to January we had not had a single case, when on the 12th of January we received a man with a wound in the head complicated with erysipelas. This was the signal for a new epidemic, which has not yet stopped, and counts me four already of the patients in my wards. Perhaps I would be still without any if I could have treated this case in a separate ward. Abroad, they apply the antiseptic method, but I see that erysipelas still exists. Some surgeons claim to have suppressed it altogether. I wish, then, they would tell us how it is to be done, and to what we shall attribute this persistence. The development of

erysipelas in towns and without communication is without question."

Verneuil here related two cases, one of a young woman who was attacked with erysipelas while she was living alone in a château in the country, away from all danger of contamination. The other case was similar: so that there are two ways of its spread in the hospitals, spontaneously and by contagion. He then laid down the following rules, first saying that erysipelas was a disease that no doubt had a parasitic origin.

1. Doctors in towns should, whenever possible, take care of these patients at home, and by proper measures endeavor to stop the spread of the infection.

2. If they are admitted into the hospital, they must be isolated.

3. If this is not possible, then at least they should be placed in beds as far as possible from the others, and a sort of *cordon sanitaire* established around them.

4. The treatment must attempt to destroy the germs of the malady, particularly by the prolonged carbolic spray, which has the double advantage of creating an aseptic atmosphere and acting topically at the same time.

5. Against interior erysipelas the precautions must be just as great. Employ antiseptic treatment along with emeto-cathartic and antipyretic agents, acid drinks, alcohol, aconite, etc.

6. The antiseptic precautions must be maintained after the disease has disappeared, as the danger of contagion probably continues during all the period of desquamation.

Dr. Le Fort, speaking on the same subject, said that for some time he had employed camphorated alcohol. He had done it at first so that the hospital assistants would not use the alcohol, but he finds that camphor in alcohol is an excellent antiseptic. He even prefers it to the ordinary carbolic-acid solutions for treating wounds. He thought that the antiseptic should not consist only in phenol, but hoped that some definite rules would be laid down, for what does well in one case does not answer in another. Alcohol alone he found did not answer so well.

Dr. Trélat did not think it mattered much, and said that it was best to take whatever was most convenient, whether phenol, chloral, or corrosive sublimate. The main point was the use of antiseptics.

The discussion on the depopulation of France still goes on. Prof. Fournier, of the St. Louis Hospital, the great successor of Ricord, has had his say in regard to the influence of syphilis on the decrease of population. He gives the statistics of two hundred cases observed by him in which the husband was syphilitic. There had been four hundred and three confinements, which gave two hundred and eighty-eight living children and one hundred and fifteen dead at birth. This represents a proportion of twenty-eight per cent. of deaths. Not only did the children die, but there was a largely-increased number of abortions. He spoke of one case that he knew of, where the husband acquired syphilis and afterwards the wife became pregnant seven times. Three of these times terminated with loss of the child by abortion, and the other four were born dead. He gave other facts to prove that the mortality was as much as seventy-seven per cent. in children born of syphilitic parents. Having said so much, he hoped that the prophylaxis of this trouble would engage the attention of the hygienists, and that the municipal council would take it in hand. As physicians, they had much to do also in insisting with the patients that a very long treatment was needed to eradicate the disease, not merely for months, but for *several years*. Young married people should be told the danger that existed to the wife and children, and such marriages should be delayed at least three or four years. This is very important, as the doctor will be blamed for the accidents that will arise in cases where he gives his consent too soon.

M. Lunier, speaking of the fact that Dr. Le Fort had recommended the encouragement of immigration, said that he did not find that a blessing to France. It was all very well in the United States, where the immigrants become citizens of the country in a few years; but in France not two per cent. become naturalized, but come to make money, intending to return to their own country.

With reference to some clinical results of the stretching of nerves which have recently been reported, Prof. Heydenreich, of the faculty at Nancy, reviews the subject. He gives a number of cases in which it was performed with more or less success, and, after speaking of the fact that it was introduced by Nussbaum in 1860, he concludes as follows:

"The stretching of nerves is not by any means devoid of danger, and the successes that the operation has given are mostly incomplete or temporary, so that one should not attempt it until after having employed all the resources that medication offers, unless the gravity of the trouble command immediate intervention, such as tetanus. In neuralgia, we should ask ourselves if section or resection of the nerve is not preferable. When a mixed nerve is affected, as in the neuralgias of the members, there is no doubt but that elongation will have advantages over any section, as it keeps intact the motor function of the nerve, which would be suppressed in section. When the neuralgia is in a purely sensitive nerve, like the fifth (trigeminal), it is difficult to pronounce on the value of the operations, but, the elongation of the nerves of the face not being without grave danger, resection would here be preferable. In spasmodic local affections elongation has some-

times great advantages over section, particularly in reflex epilepsy and in traumatic tetanus, when one can find in these neuroses the point of departure. It will also be of service in traumatic paralysis. I would not, however, advise the operation in glaucoma, for which iridectomy must remain the best means. As to affections of the central nervous system, particularly locomotor ataxia, the operation seems to exercise such a bad influence that it will not be prudent to attempt it."

Broncho-Pneumonia.—Prof. Hardy, in a recent clinic at Charity Hospital, said, "I wish to speak to you to-day of a patient, who is now convalescent, and who came in some days ago with a grave pulmonary affection that at one moment gave us great fear for his life. The man is 60 years of age, an actor by profession, and notwithstanding his mode of life he has been in good health up to ten days ago, when he was taken with a sudden fever, followed by a quiet delirium, so that when he was brought here he could not give any account of himself. His temperature was then 38.2° (C.), and the pulse was 108. He was in a complete state of agitation, trembling like a leaf. Auscultation showed on the left side râles, noisy and crepitant, coinciding with dyspnœa, and a little cough, but no expectoration.

"When I saw him he was in the same state. We thought for a moment of alcoholism. The temperature was now 39° and the pulse 120. The tongue was dry. Examination of the chest showed that the percussion was normal, but auscultation revealed râles of a snoring character, well marked on inspiration as well as on expiration, besides here and there râles of a subcrepitant nature, without any metallic character. I wish to insist on this last point, for the metallic timbre of a râle indicates that the air is passing over hardened pulmonic tissue, therefore its absence shows that there is no induration present, such as is found in tuberculosis and in pneumonia. In presence of these symptoms we thought of the possible existence of a general bronchitis, both of the larger bronchial tubes and the smaller ones. In the subscapular region we noticed a slight, real, crepitant râle, which was only heard on inspiration. There would seem to be here, then, a point of lobular pneumonia existing, making the case one of characteristic broncho-pneumonia. The progress of this case has been interesting. For the first few days there did not seem to be any improvement,—for the moment, indeed, he seemed to be worse. However, under the influence of the administration of kermes mineral, antimony sulphuratum, cupping, and vesication, the dyspnœa diminished. He regained his consciousness, but, notwithstanding this amelioration, the râles were still to be heard, except that the fine subcrepitant râle had gone, proving that the inflammation of the smaller tubes had disappeared. It is mostly in children and old people that we see broncho-pneumonia. In this case, while the man is only sixty, still his manner of life and profession has aged him and brought on a weakness before his time, so that a simple cold could bring on this trouble. As to the nervous symptoms in broncho-pneumonia, it is quite common to see convulsions in children caused by it, and in old people it very frequently gives rise to delirium and trembling, and it is well to bear this in mind so as not to mistake it for delirium tremens. The absence of cough and expectoration is the rule in this trouble. It is explained by the age of the patients. Infants and old people expectorate very little. When there are any sputa they are never of the rose-color or transparent appearance of pneumonia. The temperature also never remains very high. When it does rise it goes down as quickly as it comes, thus differing again from pneumonia.

"The treatment is rather difficult to formulate, but, as the cases are mostly of a weak type, blood-letting, as the rule, should not be advised; but if they should be robust it would be advisable, as it is one of the best means of diminishing asphyxia, especially wet cupping; even dry cups, with those who can ill support a loss of blood, render great service. As the bronchial tubes are obstructed, an emetic is useful, especially in children. Ipecacuanha is the best. You can also apply blisters over the affected area where you hear any *souffle*, and support the powers of the system by giving alcohol with cinchona; good Malaga wine and coffee may also be given."

Hot Water in Parturition.—Dr. Auvard uses injections of hot water in labor, and has studied its action in a series of cases. The method of causing labor had been abandoned, owing to its supposed danger, but late observations by Drs. Auvard and Pinard at the Lariboisière Hospital seem to prove that there is no danger if the injections are properly given. They are as follows:

℞ Bi-iodide of mercury, 5 centigrams;
Iodide of potassium, 5 centigrams;
Water, 1000 grams.

This is mixed with an equal quantity of water at 48° C. when used, of which about one litre (about a quart) is sufficient for the douche. It must be carefully used. The injection is *made slowly*, and not dashed against the neck. It will usually be well tolerated, as they found the uterus quite indifferent to hot water used in this way and when it is in *repose*. On the other hand, when labor has begun the uterus is very sensitive to such injections. They may be given every half-hour at a temperature of 48° C. The contractions become stronger and more energetic, though they do not increase in frequency. The rapidity of the dilatation was in most cases *doubled*. In

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primiparæ it took only three to four hours. They conclude as follows:

1. During pregnancy, when there were no signs of labor coming on, warm vaginal injections (48° C.), *made very slowly*, did not provoke any contraction, and it is concluded that they can be given without danger.

2. During labor warm injections increase the activity of the dilatation of the cervix and shorten not only the first period (the most painful and the longest), but also the period of expulsion and delivery.

Prof. Grasset, of Montpellier, recently delivered a lecture on the "Treatment of Morphiomania," in which he said that some authors prefer to break off and suppress the remedy at once, but to do so exposes these patients to collapse that may be dangerous, just as in cases of alcoholism, where the complete suppression of liquor will often lead to attacks of delirium tremens. This rule is not, however, absolute, nor general in its application; for instance, in the case of tobacco, it is best to break off at once and not practise diminution day by day. But with morphia it is better to go slowly and only reduce the dose a few milligrammes daily. If, as often happens, the morphiomaniac is used to his four, six, or more injections daily, it is best to continue them, but reduce the amount each time, rather than to reduce the number of the injections. The question arises here, Ought we to do this with the consent of the patient or without it? Here he at once would say that it is not possible to cure them against their wish. They must desire it, and strongly, too, if we hope for a cure. However, if possible, it is well to make the diminution more than the patient thinks it is. This must be done also in a regulated way. To obtain success, it is indispensable that the doctor have complete control of the administration of the drug. He must make the solution of morphine and himself give the injections. In order to make sure that all the care of the physician does not come to naught, there must be a secret watch kept over the patient so that he will not procure morphine and inject it himself. Some of them have been known to forge the handwriting of the doctor to a prescription.

Great care must be taken to find out the reason why the patient originally took to the morphine, so that proper treatment may be directed to suppress the cause as well as the baneful drug. This will also lead to a judgment as to which one of the injections it would be well to suppress first. For instance, in persons who suffer from gastralgia, continue the one just before a meal up to the last. In others who got the bad habit from the injection given for insomnia, keep up the evening dose. It is also a good plan to retain the morning dose up to towards the last.

This much said on the manner of stopping the morphine, what shall take its place while attempting a cure? Alcohol takes one of the first places. Give good wine, even cognac, at the risk of their taking a new bad habit. It is one that can be stopped better than morphine. There are moments during the cure of morphiomania when the patient is in a complete state of prostration, when he will not leave his arm-chair for days at a time. Then use alcohol; and for the same indication give coffee, caffeine, acetate of ammonia, even injections of ether, though their effects are but temporary. Ether is especially useful if there is any danger of collapse.

For sedatives, the bromides may be employed in the presence of hysteria or any general nervous symptom. For insomnia, chloral acts well. Cocaine also has been tried lately; it may be used whenever there is pain in any part of the mucous membranes. For instance, cocaine is certainly indicated by its analgesic properties over the mucous lining of the stomach in all cases of painful dyspepsias. But what cocaine does for the stomach is only what it can do for all the accessible mucous linings, such as vaginal, urethral, etc. Its use for the eye is already classic. In fact, what opium does for the interior, cocaine does for the exterior mucous membranes. Water in all its forms is a powerful aid in the treatment of our morphia-ridden patients, used as douches. Lotions with cold water are not only stimulants but real tonics to the nervous system,—that is to say, water will combat not only the actual depression, but it will go farther and act on the nervous system, and will even effect a radical cure, as it does in real hysteria, where hydropathy is the principal, often the only, treatment. On the other hand, warm baths sometimes act well in these patients when kept up a long time. He recommended also prolonged baths of static electricity. The public have retained the old idea that electrical treatment was one of shocks and efforts to contract the muscles, but the practitioner of these days knows how to use it as a means of sedation as well. Prof. Grasset closed by recommending that the doctor should never place in the hands of patients the hypodermic syringe, and, when giving a prescription for morphine, to add on it the number of times that the druggist should fill it, so as to prevent the rapid formation of the morphia habit.

Dr. Brown-Séquard, speaking at a late meeting of the Société de Biologie, said that there existed a manifest inhibition in certain phenomena in epilepsy from the beginning of the attack. In some cases there was a complete abolition of reflex movements; in others the reverse takes place, and the reflex faculty is so much exaggerated that if one touches the paralyzed member it is sufficient to produce an attack, or to increase it if it has already taken place. A motion of the part is often quite enough to start them

off; even a simple draught of air on the part has been known to have the same effect. In both cases, when the reflex faculty was lost and those in which it is increased, it is the spinal cord that is affected; but he would not say that the cord was the only seat or origin of the trouble, but that the cord is always influenced by the brain. It is true that in certain animals when we produce a lesion on the cord in the cervical region we produce an attack of epilepsy; but that does not prove, even in the animals experimented upon, that the cord is the exclusive seat of the disease; for a lesion of the pons Varolii will also produce an attack. There is one difference in these two cases: when the lesion is in the cord the epileptic zone is in the corresponding side, whereas it is on the opposite side when the lesion is in the pons; but, wherever the seat of the epilepsy may be, the cord is always influenced.

He also detailed another interesting experiment in a dog which had a traumatic lesion of the cerebellum. He had observed spinal epilepsy, in which traction, or malaxation, or galvanization of certain muscles,—any peripheric excitation,—would provoke an attack. This case of spinal epilepsy following a lesion of the cerebellum is, he thought, the only one known. We know that there exist in man, following lesions in the brain, zones which, when excited, give rise to convulsive attacks, or exaggerate such attacks when they already exist. All these facts demonstrate that the nervous centres can determine an inhibition or an exaggeration of the functions of the cord. Prof. Brown-Séquard called attention to the practical point to be derived from these facts, which was the importance of finding the peripheral points which can be excited in epileptics, and to direct the treatment there by counter-irritation with the thermo-cautery or other revulsives.

A great effort has been made for some time back against the foreign students in Paris, in order to prevent them from getting the honors of the examinations, and from taking the places in the hospitals. At a meeting of the Municipal Council on March 6 it was voted, however, to allow the foreign students to try for the posts of interne and externe as before. The qualification of French citizenship will only be asked for the hospital doctors and prosectors.

Some experiments have recently been made by Drs. Gréhant and Quinquand to determine the amount of pressure needed to cause rupture of the blood-vessels. Operating the animals with a compressed-air machine, they find that the pressure necessary to rupture the arteries is very much greater than that which exists normally in those vessels. The pressure of blood in the carotid artery of a dog being about fifteen millimetres, in one case it was ruptured at seven atmospheres, in another at eleven atmospheres, (that is to say, under a pressure of five millimetres, thirty-two, and eight millimetres, thirty-six of mercury), or, in other words, a pressure of *thirty-five to fifty-five times as much as the normal.* The jugular vein was ruptured at six atmospheres, and in another trial at nine.

Dr. Langlebert, speaking of the prophylaxis of gonorrhœa, etc., said that *virtus millia scuta;* however, he strongly recommended the routine use of the following wash:

℞ Alcohol, 30 grammes;
Sapo mollis, 10 grammes.

Dissolve the soap in the alcohol, filter, and add essence of citron rectified, 5 grammes.

Prof. Fournier, in treatment of psoriasis, uses a formula in which he combines chloroform and gutta-percha with the remedy, as it forms a pellicle on the skin and keeps the medicine applied to the part, as follows:

℞ Chloroform, 8 parts;
Gutta-percha, 1 part;
Chrysophanic acid, 1 part.

Dr. Martineau, of the Lourcine Hospital for Women, has recently been making use of the thermo-cautery and galvano-cautery in his treatment of venereal diseases. For ordinary inflammations of the vagina, gonorrhœal mostly (what they call here *vaginite*), he uses the galvano-cautery over the whole surface with excellent effects. In suppurating buboes also he applies the thermo-cautery. This forms an ulcer that heals afterwards very rapidly.

Prof. Verneuil has been attacked again on his favorite theory of *hereditary paludism*, and gives his opponents the following nuts to crack. "Without speaking of the proved facts of intermittent attacks in new-born children of parents who were suffering with malaria, cases that have occurred so close to birth that it is impossible to deny that they came from the parent and not from any external influence, as there had not been time for it to operate,—without, I say, taking this sort of cases into account, allow me to ask the following questions:

"How can we deny that there is a congenital intoxication when we have anatomical proofs of it?

"If the children so intoxicated survive, how can we affirm that the dyscrasia dating from their intra-uterine life will disappear completely and spontaneously?

"If this dyscrasia persists, no matter how latent it may be, how can we affirm that it will not some day, under the influence of some cause or other, show itself again with all its specific force?"

The anatomical proof he speaks of is a characteristic hypertrophy of the spleen which

has been found in children stillborn of malarial parents.

Great efforts have been made to contradict this theory, but so far without success. The convincing arguments of Dr. Verneuil have already won over to him most of his opponents; so much so that Dr. Percholier writes him to say that, while waiting for further evidence, he will believe with him in the possibility of hereditary paludism.

Cocaine mixture to calm cough and vomiting in chronic pharyngitis:

℞ Cocaine hydrochlorate, 0.1 gramme;
Glycerin, 15 grammes;
Distilled water, 35 grammes;
Acidi carbolici, 0.01 gramme. M.

Sig.—Paint on the part morning and evening.—*Dr. Proust.*

It will perhaps be interesting to your readers, in conclusion, if we give the status of foreign physicians in Paris, and also give some account of the new *règime* of studies and examinations that has come into force this year. First, in regard to the status of foreign doctors, none will be allowed to practise in France, now, unless they *pass all the examinations* of the new *règime*. Before, it was possible to obtain permission to practise; indeed, almost all the physicians who practise in Paris in the several colonies of the English and Americans obtained permission to practise without the slightest examination; but this power was so much abused that a great agitation arose against it, and the new law is now strictly in force. All are now asked to pass all the examinations if they wish to practise with the title of doctor. There is a secondary degree to be had, but the studies are almost as hard and the examination is nearly as long. This is called *médecin de santé*, but it only carries the right to practise in a certain district, and if any important operation is to be performed the *médecin de santé* is compelled to call in a doctor. Some of the English doctors here hold this degree. All of the Americans who practise here, with one exception, have obtained a license to practise through influence with the political head of the Department of Public Instruction; but, as before stated, this is now refused, and all who now wish to practise in France, no matter what previous degree they may have, will be compelled to pass all the examinations. Those who hold proper diplomas will get a credit *of time*, but not of examinations; that is, they can pay all the fees and proceed to examinations at once, and not take four years' time as the French new students do.

Any failure to pass an examination will cause a candidate to be put back three months, and, *en passant*, the professors do not hesitate to refer any one to his studies for three months who fails to answer well the questions put to him. The examinations are public, but the audience consists mostly of some dozen or more of students who are coming up for the same fate and come to see the run of the questions. The examiners are a jury of three professors, or two assistant professors and a head one. They wear gowns like Episcopal ministers and high hats like Greek priests, except that the gowns and hats are made of red as well as black silk. The head professor has more red than the assistants. The candidates are taken in blocks of six at a time, and the examination lasts about two hours in all, each professor taking his turn at the unhappy student. The result of the examination is declared at once after the examination. Three marks are given: good, satisfactory, and passable. Those getting lower marks are adjourned. The following are the examinations:

First Examination (Botany, Zoology, Physics, and Chemistry).—The studies for this first examination are complete. There are laboratories where the student dissects the fresh plants and see the dry ones, and also where he handles the different physical instruments, such as microscopes, electrical batteries, etc. Then the chemical work-rooms are very good. Each student has his bench, where he works for several hours. This preparation is needed, as at the examination the student is handed the various plants to give their names and uses. He is also handed one or more chemical substances to recognize and give the properties of.

Second Examination (Anatomy and Physiology).—This examination is divided into two parts. In the first one the student is taken to the dissecting-room, and there he finds his name on the subject and the part given he has to dissect. He is given four hours to do the dissection. He then comes before the jury for examination on anatomy and histology. The second part of this examination, on physiology, is taken later, usually three months later. It is oral only.

Third Examination.—Also in two parts. First, surgery, in which the student is required to perform any surgical operation the professor tells him to. This is done on the cadaver: it is usually an amputation. The oral part is on medical subjects and obstetrics.

Fourth Examination (Hygiene, Legal Medicine, Therapeutics, and Materia Medica, with Pharmacology).—During this examination the student is required to write a medico-legal report of a case given by the professor, mostly suicide or infanticide.

Fifth Examination.—This is also divided into two parts, and consists of clinical examinations in the hospital. The students must give practical proofs on patients that they understand diagnosis. They are also handed a specimen of some tumor or other pathological subject and requested to state what it is, etc.

It winds up then with the presentation of a thesis, which is to be printed in French and one hundred copies presented to the faculty. This thesis is then to be sustained by the candidate before a jury of the faculty, who will discuss its points with him. If all is satisfactory, the minister will then accord a diploma. The cost of all the fees is stated at eight hundred and eighty francs (about one hundred and seventy-five dollars), but this may be increased by the fact that the student who is put back loses the examination, or rather has it to pay over again. However, in round terms, two hundred dollars is all the cost, which includes all the laboratory and dissections, also the library-fees and the printing of the final thesis. Your correspondent will be glad to give any further information needed. THOMAS LINN.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A STATED meeting was held March 23, 1885, the President, DANIEL LEWIS, M.D., in the chair.

Dr. W. GILL WYLIE read a paper entitled

A SIMPLE AND EFFICIENT SURGICAL OPERATION FOR LACERATED PERINEUM.

The operation referred to was the secondary, not the primary one, and was for lacerations not extending through the sphincter ani. Some preliminary remarks were made upon the manner in which the pelvic organs descend after rupture of the perineum, the author's view being that the commencement of the change in position of those organs, producing rectocele, etc., was due to straining, as at stool, etc., and not to the pressure brought to bear by the abdominal contents during the upright position of the patient. On this point he accepted Hart's views, with some slight modifications. Cases had come under his observation in which the perineum had been torn entirely through without there being a change in the position of the uterus as the result. He thought the perineum was not, as Dr. Emmet claimed, intended to sustain the rectum, but to enable the rectum and the anus to perform their function.

The author considered the perineum as the movable point of attachment for the transversus perinei, the bulbo-cavernosus, the sphincter ani and levator ani muscles, and some of the pelvic fascia; also in general for the anus, rectum, and posterior wall of the vagina. It is composed chiefly of firm connective tissue, such as forms the ligaments of muscles in other parts of the body. He described it further as consisting of two parts: the superficial and the deep. The external or superficial is composed of the transversus perinei, the bulbo-cavernosus, the sphincter ani, and the perineal fascia; the internal, of the levator ani, some fibres of the internal sphincter ani, and of the pelvic fascia, constituting along with the levator ani a firm ligamentous band in front of the rectum, where it joined the anus. This ligamentous band not only prevented fæcal matter being forced out through the vagina, but sustained the anterior wall of the vagina and the bladder during forcible intra-abdominal pressure, as at stool.

Dr. Wylie's operation consisted in denuding the mucous membrane which once formed the ostium vaginæ only as high up as the caruncles and an inch or an inch and a half into the vagina laterally, including the angles of the rectocele, until firm white tissue was reached, then up over the rectocele on to the other side, but only removing mucous membrane and avoiding injury of the muscular structure of the vagina. The denuded surface when separated, instead of being of crescent or clover-leaf shape, was nearly in the form of a square. The sutures were put into the superficial perineum in the same way as in the old operation. The last three or four entered from within the vagina, passed from the right side, dipping deep laterally, completely under the angle of the denuded surface over the rectocele, to its centre; then the needle was re-entered at the same place and carried completely under the angle of denuded tissue on the opposite side, and brought out on the side of the vagina opposite the point of entrance. The last suture was passed in the same way and made to include the edges of the undenuded vagina. After all the sutures were passed, usually six or eight, he thoroughly stretched the sphincter ani, which relieved tension in that direction, lessening the risk of troublesome hemorrhoids and fissures. When the sutures were twisted, the external perineum was drawn upwards and inwards, the most prominent part being that next the rectum.

Before the operation, when necessary, pledgets of cotton, containing glycerin and alum or other applications, surrounded the cervix. Bichloride of mercury solution was employed during and after the operation, and twenty grains of iodoform powder dusted over the sutures, to be renewed after urination. The catheter was not used. The bowel moved once a day by mild laxative. In case of pain, morphine was given. Except when the vagina was extensively lacerated, he seldom employed other than silver-wire sutures. In old women, where the anterior wall of the vagina was excessively relaxed, the denudation was extended higher up on the sides and posteriorly, almost occluding the vagina. He preferred a round sewing-needle. The stitches were removed about the tenth day, and the patient allowed to sit up four or five days later.

Dr. J. B. HUNTER opened the discussion, and said that he had little to criticise in Dr. Wylie's operation, which was essentially the one which he had performed for some years. There were many ways of repairing the lacerated perineum, a good proof that we had not yet discovered the perfect way. It was also proof that good results could be obtained by different methods of operating. The first method which he had witnessed was that in which the denudation took the form of a horseshoe, and was objectionable because it formed a superficial perineum. He thought Dr. Emmet made a mistake when he spoke of his new operation as simply uniting the posterior walls of the vagina. In Dr. Hunter's opinion the perineum has depth as well as length and breadth, and Dr. Emmet's operation was valuable because it completely restored the perineal body. It often occurred that the physician was unaware, while supporting the perineum during labor, that laceration of the body of that tissue had already taken place, although it might not be apparent to the superficial view. Directing his remarks to lacerations not extending through the sphincter ani, he had for some years avoided denuding other surface than mucous membrane, and he introduced the sutures altogether from above downward. In that respect his manner of operating differed from Dr. Wylie's. He had employed almost every variety of suture and found that good results could be obtained from all, but he preferred catgut to silver wire, as it was less rigid. Too great tension should be avoided, but care should be taken to properly coaptate the denuded surfaces. One of the advantages of his method of operating was that the patient had no after-pain and did not require morphine. He had often noticed after his operations that patients who had for years worn a pessary were enabled to go without it.

Dr. P. F. MUNDÉ was surprised to find, on his return from Europe a number of years ago, that the operation for repair of the perineum not extending into the rectum was being very successfully performed in America, while in Europe success had been obtained only for the more extensive lesion. The reason was that here the sutures were passed more deeply, while in Europe only a superficial perineum was formed. When he witnessed Dr. Emmet's new operation it struck him that simply narrowing the posterior wall of the vagina would not unite the perineum below, and thus there would be left a gaping vulva, and in one operation done by himself he found this objection to be valid. He thought the old clover-leaf form of denudation was very similar to that practised by Dr. Wylie, as it would require only a stretching of the denuded surface to cause it to assume the nearly straight lines pictured by the author of the paper. He mentioned the much better results obtained in private than in hospital practice, and the fact—alluded to by Dr. Hunter—that the patient was often relieved of the necessity of wearing a pessary after the operation.

Dr. HUNTER corrected a misapprehension on the part of Dr. Mundé, who supposed Dr. Emmet's operation failed to restore the perineum to its normal condition. That was, in Dr. Hunter's opinion, the great advantage of the operation.

Dr. B. F. DAWSON said he also had his peculiar way of repairing the lacerated perineum. The duty of the gynæcologist was to restore the ruptured perineum, and not to make an artificial one. It was a mistake to denude a surface three inches in extent when the rupture extended only two inches or less. After denuding the original tear, the simpler the manner in which the surfaces were united the better. Avoid using many sutures, he said, for they corrugated the surface, strangulated the vessels, caused abscess and much pain. He was able usually with two sutures to perfectly coaptate the denuded surfaces, avoiding twisting the wires too tightly, which would strangulate the tissues. Dr. Emmet's recent operation was perfect, except that it was much more difficult to perform than the one which he adopted. He never kept his patients abed longer than the eighth day, and they walked about on the tenth. There was no pain, and he had had no failure.

Dr. CASTLE, referring to the effect of intra-abdominal pressure, thought excessive flatus should be avoided in patients who had had rupture of the perineum.

Dr. A. S. HUNTER spoke of the number of abscesses which often formed after the old method for repairing the perineum, and of the great pain which the patient suffered. These symptoms he had observed to be absent in Dr. Wylie's cases.

Dr. CRANMER was astonished that physicians in the city met with so many cases of rupture of the perineum. He had never yet seen the lesion.

Dr. J. H. BOLDT bore testimony to the advantages of Dr. Dawson's method of operating, especially of the feature relating to the small number of sutures employed.

Dr. WYLIE would not object to the use of catgut where the tension was slight. With regard to the form which the clover-leaf would assume if the tissues were stretched, he said the change of form would not do away with the fact that the tissues in the angles remained undenuded. He doubted whether Dr. Dawson's method would give permanently good results, especially in marked cases of rupture. He thought the method suggested by Dr. Hunter would not bring up the everted ostium vaginæ quite as well as his own method. He laid stress upon the importance of stretching the sphincter ani, and upon the effect of straining at stool in producing rectocele.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 19, 1885, A. JACOBI, M.D., President, in the chair.

Prof. MERRIAM, of Columbia College, read a paper entitled

THE TREATMENT OF PATIENTS IN THE TEMPLE OF ÆSCULAPIUS.

In the first part of the paper, and interspersed here and there throughout, the author referred to some facts regarding ancient medicine which had already passed into history. The new facts referred to the revelations of excavations made in the temple of Æsculapius at Athens, Epidaurus, and Cos. Several tablets had been found recently containing inscriptions which had not yet entered medical literature. Prof. Merriam translated a number of these inscriptions, and also referred to certain other objects unearthed in these ancient temples. They all related to the cure of diseases or abnormal conditions in a miraculous manner by the Deity, or through his agents, the serpent, the dog, etc. This belief in the miraculous cure of disease among the ancients is also common among the people of the same countries to-day, the only difference being that relics and shrines are substituted for the temple of Æsculapius.

Dr. JOHN C. PETERS made some remarks, referring to the studies of ancient medicine by Dr. Watson and also by himself, and said that he thought Hippocrates had been shown to be free from the trickery and deception practised in the temple of Æsculapius.

STATED MEETING, APRIL 2, 1885.

The President, A. JACOBI, M.D., in the chair.

ANTIPYRIN.

Dr. W. H. DRAPER read the paper, in which he said that it was a striking fact that, while the progress of science has added little to our knowledge of the essential nature of fever, it continues from time to time to enlarge our resources for its control. One of the latest contributions to the means of subduing the heat as well as the other symptoms of fever is antipyrin. This substance has been brought to the notice of the medical profession within the last year, and it has already been the subject of extensive physiological and clinical experiment. The author quoted the results of experiments by different observers upon animals and clinical observations upon man. He then said that his own experience with antipyrin was obtained during a recent term of service in the New York Hospital, and mainly in the treatment of typhoid fever. His predecessor, Dr. Peabody, had already been using it during his term of service in October last, and had been much impressed with the certainty of its antipyretic action, and especially with its tranquillizing influence upon the nervous symptoms of fever.

Dr. Draper's observations were made in twenty cases of typhoid fever, and a tabular account of these cases accompanied the paper. The majority of the cases were severe in type, had numerous complications, and several of them had continuously-high temperature. Of the twenty cases, seventeen were males. Three were aged between 15 and 20 years; fourteen between 20 and 30 years; three between 30 and 35 years. There was among the patients using the drug a mortality of twenty-five per cent. Of the five who died the ages were 18, 22, 25, 28, and 30 years, respectively. One died on the fifteenth day of the disease, one on the twenty-fifth, one on the thirty-seventh, one on the fifty-fifth, and in one the duration of the disease could not be ascertained. The highest temperature recorded in the fatal cases was 107.6° F., on the twenty-fourth day of the disease. In none of the other four fatal cases did the temperature quite reach 106°. The average temperature in these five cases was 101.1°. In some of the cases the comparative effect of the cold bath and antipyrin in the reduction of the temperature was shown, the difference in the degree of diminution of the temperature being in favor of the drug by from one to two and more degrees.

Of the cases in which recovery took place, in one the temperature ranged from 103° to 106.6°. The average temperature varied in the different cases from 101.6° to 103.6°. Among the complications were vomiting, diarrhœa, constipation, hemorrhage from the bowel, sweating, nervous manifestations, semicoma, chills and sweats, etc.

The antipyretic treatment in all of the cases consisted either in the external application of cold by sponges or baths, or in the administration of antipyrin. The method of administering the drug was to give seventy-five grains in three doses at intervals of an hour, the first two doses containing thirty grains each, and the third fifteen grains. The almost uniform effect of the medicine was to reduce the temperature from 104° or 105° to 100°, or even to 98.5°, the fall being gradual for three or four hours. The rise which took place on the discontinuance of the drug was unattended by chill. It was rarely necessary to use more than one hundred and fifty grains in the twenty-four hours in order to maintain the average temperature from two to three degrees below what might reasonably have been expected without the use of the antipyrin. The pulse followed proximately the temperature-curve, and the general beneficial effect upon the nervous system was such as was usually observed in antipyresis. In all the cases the antipyrin depressed the temperature more or less. In one case it failed to lower the temperature when given by the stomach, but succeeded when given hypodermically.

In another case it occasionally failed to lower the temperature.

The effect upon the pulse was usually to diminish its frequency and to increase its strength. No marked depression of the heart's action was noticed. One of the most marked and uniform effects observed was the cleaning and moistening of the tongue. Sweating, more or less profuse, was caused in six cases. Vomiting was provoked by the drug occasionally in six cases. The nervous symptoms, as a rule, were favorably affected. In only one instance did it appear to exert any influence to depress the spirits. It usually quieted delirium, cleared the intellect, and diminished restlessness.

In six cases the drug caused an erythematous flush resembling measles. In one case a macular eruption appeared. The eruptions caused but little irritation, and faded within a few days, even though the remedy were not discontinued. The urine presented no other changes than those observed in cases in which the disease was complicated by parenchymatous nephritis.

Dr. Draper had used antipyrin also in pneumonia, scarlet fever, intermittent fever, and tuberculosis, and it had invariably reduced the temperature. While it did not cut short the disease, yet in reducing the temperature it contributed to the well-being of the patient.

It would seem idle to speculate as to how antipyrin reduced the temperature, but it might be assumed that it was not an antipyretic in the sense that quinine and the salicylates were antipyretics. The latter neutralized the cause of the fever, while the former smothered the fever but did not extinguish it. Whether the antipyretic action was the result of a chemical effect on the process of oxidation, or whether it was the result of an inhibitory influence upon nerve-centres, was beyond our present knowledge. It seemed to Dr. Draper that the nervous centres were primarily affected; but, as already stated, this was merely speculation.

Conclusions: 1. Antipyrin is an *efficient* means of reducing the temperature. 2. It is apparently a *safe* means of reducing the temperature, if prudently administered and carefully watched. 3. That while it does not, so far as experience has demonstrated, modify or abort the disease, it contributes to the well-being of the patient by reducing the temperature. 4. When carefully administered it rarely produces unpleasant symptoms, or such as would counterbalance its benefits by reducing the temperature. 5. Future experience will probably enable us to more definitely formulate the conditions in which antipyrin would be especially useful, and thus constitute it a precious contribution to the art of healing.

DISCUSSION.

Dr. LEONARD WEBER had employed antipyrin in fifteen cases, including cases of pneumonia, bronchitis, scarlet fever, etc. In not a single one of the fifteen cases was he disappointed in his desire to reduce the temperature. The first case was one of double pneumonia in a child, of severe type. The drug reduced the temperature from two to three degrees when administered either by the mouth or rectum. Resolution began to take place at the close of the fourth day of the disease. In another case he gave smaller doses more frequently repeated, and had no difficulty in keeping the temperature down to 101° or 102°. He noticed a little nausea when the drug was administered in this manner. He thought it well to begin with relatively small doses, say half a gramme by the mouth or rectum in children and a gramme in adults, before proceeding to give larger doses, as was first proposed. The remedy acted quickly, and we would know within a short time after the administration of the first dose how the patient would bear it, and thus avoid producing too great and rapid lowering of the temperature.

Dr. H. J. BOLDT had given as much as four grammes at a dose, and had found that in this large quantity antipyrin caused increased frequency with diminished strength in the pulse, prostration, and symptoms seen in carbolic-acid poisoning. The effects of the drug were noticeable within from three-quarters of an hour to an hour, and the influence remained only three or four hours. He usually began with from twenty to thirty grains, and increased the dose according to the indications. In two cases of puerperal septicæmia the drug had no effect. A negative result was also observed in another case.

Dr. F. P. KINNICUTT had obtained almost exactly similar results from the use of antipyrin to those described by the author of the paper. He had employed it in facial erysipelas, rheumatism, pneumonia, pleurisy, scarlet fever, phthisis, etc. The production of gastric disturbance had been exceptional in his experience. In only one or two instances had he seen any chill. He had been pleased with its action in controlling the afternoon temperature of phthisis, but it had been said to be contraindicated when there was sweating. Regarding sub-normal temperature without other symptoms of collapse, he had noticed it in a single case.

Dr. G. F. PEABODY said, with regard to the variability in the effect of the drug, that doubtless it was sometimes adulterated. When he first began its use it never failed to reduce the temperature. In later cases it had failed in a number of instances, and this he thought was due to adulteration. He would emphasize the fact that by employing this remedy we at all events did our patients no harm. Even though we fail to reduce the temperature, we do not diminish the force of the heart's action. It was also a matter of

some interest to know that if the drug occasionally produces vomiting, it can be administered subcutaneously without any injurious local effect. Dr. Peabody had employed antipyrin in almost all febrile affections, and only lately had he failed to reduce the temperature. He mentioned the case of a fleshy girl, suffering from typhoid fever, in whom the cold bath failed entirely to reduce the internal temperature, while antipyrin caused the vaginal temperature to fall even below normal.

Dr. MALCOLM MCLEAN had succeeded in reducing the temperature of a case of chronic pyæmia following puerperal fever, all other antipyretic remedies having completely failed.

The discussion was closed by Dr. DRAPER, who said that in antipyrin we had a very efficient means of treating a symptom.

AN ORIGINAL OPERATION FOR RUPTURED PERINEUM.

Dr. A. C. POST then read a brief paper on this subject, and said that the operation had not been performed a sufficient number of times to entitle it to be regarded as established, but in the three cases in which he had performed it the result had been so satisfactory as to lead him to recommend it to the profession as worthy of trial. The operation was simpler in execution than the one ordinarily performed, and he thought it secured a more solid perineal body, and it also had the advantage that there was no loss of substance in its performance, and consequently it might be easily repeated if for any reason the first operation should fail.

An incision was made on each side of the vagina to the depth of fifteen or twenty millimetres. The incisions met in front in a manner to divide the parts into an upper and a lower segment. The upper segments were turned up and formed the floor of the vagina, and were secured in position by a row of catgut sutures passed, not through the skin, but through the subcutaneous cellular tissue so as to turn the edges of the skin upward to form a ridge on the floor of the vagina. A second row of sutures, of silver wire, were passed from either side through the deepest part of the incisions, where the upper and the lower segments met. The ends of these sutures were passed through glass beads and perforated shot, and after the flaps were brought into close contact the shot were compressed. The inferior edges were united by fine sutures, and an iodoform dressing was then applied. The integument on the inner side of the thighs should be protected from pressure by the shot and beads. The patient should be allowed to urinate without the use of the catheter, and the parts be washed afterwards with a solution of mercuric bichloride. The sutures might be removed at the end of ten days or a fortnight.

The paper was discussed by Dr. FANNING and Dr. DAWSON.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held March 25, 1885, JOHN A. WYETH, M.D., President, in the chair.

DIPHTHERITIC CROUP.

Dr. H. J. BOLDT presented the trachea and lungs removed from the body of a child which died sixty-three hours after tracheotomy for diphtheritic croup. Dr. Boldt said that the specimens confirmed the views of some of the members of the Society that, as a rule, in death from asphyxia the lungs are anæmic rather than congested.

OVARIAN TUMOR TWISTED FIVE TIMES UPON ITS PEDICLE.

Dr. J. B. HUNTER presented an ovarian tumor removed from a patient in February, after having developed rapidly and given rise to symptoms of peritonitis. The operation was done in advance of the time appointed, because of the symptoms present. It was found on cutting down upon the tumor that the veins in its walls were largely distended, and the least prick of the surface gave rise to copious hemorrhage. The tumor was twisted five times upon its pedicle, causing strangulation of the vessels. Hemorrhage had taken place between the separated walls. Soon after the operation the temperature and pulse-rate became normal, and the patient made an uninterrupted recovery. Had the operation been delayed two or three days, the prognosis would have been much graver.

OVARIAN ADENO-CYSTOMA, WITH SPONTANEOUS RUPTURE OF ONE OF THE CYSTS.

Dr. PRUDDEN presented the specimen, which was removed from a woman 28 years of age, who had first noticed a tumor seventeen months before, shortly after her last confinement. Symptoms of peritonitis developing, laparotomy was performed and the tumor removed, but the patient died on the fifth day after the operation. One cyst of the adenocystoma had ruptured and given rise to the symptoms.

Dr. HUNTER said that he had removed a tumor, almost the counterpart of the one presented by Dr. Prudden, on Wednesday last, the patient being 50 years of age and having noticed the tumor only nine months before. The growth was an adeno-sarcoma.

PECULIAR-SHAPED HÆMATOIDIN CRYSTALS.

Dr. WALDSTEIN presented microscopic sections illustrating rod-like hæmatoidin crystals, collected in asterisks, found in a tumor of the testicle. There was no other evidence of hemorrhage into the tumor. This was the only specimen containing this form of crystal which he had seen, and he believed it to be unique. It has been said that the size of the crystal depends upon the slowness of crystallization and the clearness of the mother-liquid.

Dr. JANEWAY said that he had seen similar crystals in urine, but they occur very rarely. They have also been illustrated by some German writers.

TUBERCULAR LARYNGITIS.

Dr. VAN SANTVOORD presented a specimen obtained from a hospital patient with an incomplete history. Besides the tubercles in the larynx, there were also tubercular deposits in the lungs, liver, and intestines.

ILIO-PSOAS ABSCESS; DISCHARGE THROUGH THE DUODENUM.

Dr. E. G. JANEWAY presented the specimen, which was removed from the body of a woman 45 years of age, who was admitted to the hospital after having been sick for five weeks, with pain in the right lumbar region, extending down the thigh, and coming on suddenly. There was flexion of the thigh upon the pelvis and of the leg upon the thigh. There was little or no fever. A distinct swelling could not be detected, but, as there was a sensation of deep-seated infiltration in the iliac fossa, the hypodermic needle was introduced twice, but no pus was obtained. There was diarrhœa, but no pus was detected in the stools by naked-eye inspection. The stools were colored from bismuth. At the autopsy a small ulcer was found opening into the duodenum, communicating with a deep abscess with thick walls in the iliac region. There was thrombosis of the iliac arteries.

PERFORATING ULCER OF THE ŒSOPHAGUS.

Dr. JANEWAY also exhibited the œsophagus of a child who had died rather suddenly, having suffered from infantile paralysis, diarrhœa, bronchitis, and pericarditis. A round, perforating ulcer was found at autopsy, about half an inch across, situated in the anterior lateral wall about an inch from the stomach. There were evidences that it was ante-mortem.

TRACHEAL STENOSIS; SUDDEN DEATH.

Dr. JANEWAY also presented the trachea of a child, in which there was cheesy degeneration of the glands, causing partial stenosis; and one of the glands having ruptured into the trachea, produced complete obstruction and sudden death.

PERITYPHLITIC ABSCESS.

Dr. PEABODY presented the cæcum and the vermiform appendix removed from the body of a child 12 years of age, who was brought to the New York Hospital a week ago, with a history of having been in good health until ten days previously, when she was taken with pain in the belly and obstinate diarrhœa without dysenteric symptoms. The temperature ranged between 103° and 105°, and there were frequent irregular chills. There was marked distention of the entire abdomen, with pain and tenderness and dulness in the right iliac region, following the course of the ascending and transverse colon. The dulness over the transverse colon could not be distinguished from the liver-dulness. Inasmuch as a free purge had brought away copious fecal matter, in the presence of the symptoms mentioned it was thought that there was suppuration, probably in the region of the cæcum, without invasion of the peritoneum. A surgeon who saw the patient made two punctures with a long exploring-needle, but obtained no pus. It was then thought that laparotomy offered the only chance of recovery; but the patient's condition was so low that the operation was not performed, and she died two hours after the time appointed for the operation. At the autopsy an abscess-cavity was found beneath the cæcum, not communicating with the peritoneal cavity, and containing foul pus. The vermiform appendix was friable, but not yet ulcerated. It contained a mass of hardened fæces three-quarters of an inch long and of the thickness of the prong of an ordinary dinner-fork. Quite a large clot marked the places of puncture. There was a caseous centre about the size of the tip of the finger in the right lung, and in the immediate neighborhood were a number of miliary tubercles. Elsewhere the lungs were normal. The dulness in the region of the transverse colon was due to enlargement of the liver, and this organ contained a number of caseous foci. Examination revealed no evidence of tubercle in the abscess at the cæcum.

ATHEROMATOUS DEGENERATION OF THE CORONARY ARTERIES; MYOCARDITIS; SUDDEN DEATH.

Dr. PEABODY presented a heart removed from the body of a man 60 years of age, who had lived an active life of dissipation, and who died suddenly at the card-table while in apparent health. The autopsy revealed dilatation of the left ventricle, atheroma of the aortic cusps, and marked atheromatous degeneration of both coronary arteries with narrowing of their calibre. There was fibrous interstitial myocarditis and diffuse nephritis.

Dr. JANEWAY mentioned the case of a woman who died suddenly while vomiting, and at the autopsy there was found endarteritis surrounding both coronary arteries, and atheromatous degeneration of the aorta.

Dr. PRUDDEN asked Dr. Peabody whether he thought spasmodic closure of the coronary arteries was the cause of death in his case.

Dr. PEABODY thought that could hardly have been the cause of death, because the walls of the arteries were too unyielding to contract spasmodically.

Dr. VAN SANTVOORD remarked that in this connection the experiments of Cohnheim upon the cardiac circulation were worthy of consideration. He found that on occluding the coronary arteries after a certain amount of anæmia had taken place there was a sud-

den transition from a well-working heart to sudden paralysis of the cardiac muscle.

Dr. WALDSTEIN recalled the case of a man who suffered from repeated attacks of angina pectoris for five or more years. At the autopsy very extensive patches of myocarditis and enormous foci of infarction were found. Both coronary arteries were the seat of thrombosis. All the arteries, so far as examined, were the seat of endarteritis, and the surrounding muscular fibres showed various degrees of fibrous myocarditis. The patient's death was not sudden. Dr. Waldstein would attach more importance to myocarditis in Dr. Peabody's specimen than to atheroma of the coronary arteries.

Dr. PEABODY thought interference with the nutrition of the heart was the primary cause of degeneration of the muscular wall, that this degeneration was the cause of death, and that the change in the coronary arteries was only the indirect cause of death.

Dr. PRUDDEN said it should be borne in mind that in Cohnheim's experiments there was acute occlusion of the blood-supply to the healthy heart. In a considerable number of cases we must take into account two conditions, weakened myocardium and perhaps sudden closure of the diseased arteries.

Dr. PEABODY remarked, concerning the appearance of the heart-wall, that it was often apparently normal to the naked eye, while microscopical examination revealed extensive change.

The PRESIDENT referred to the possible influence of insufficient blood-supply to the central nerve-ganglia of the heart in cases of sudden death.

REVIEWS AND BOOK NOTICES.

DISEASES OF THE SPINAL CORD. By BYRON BRAMWELL, M.D., F.R.C.P.(Edin.), Lecturer on the Principles and Practice of Medicine and on Medical Diagnosis in the Extra-Academical School of Medicine, Edinburgh, etc. With One Hundred and Eighty-Three Illustrations. Second Edition. Edinburgh, Young J. Pentland, 1884. Pp. 359.

While much has been recently written in monographs and in contributions to journals on the spinal cord and its diseases, a real need has existed for a concise and well-arranged text-book on this subject. This has now been supplied by the excellent work of Dr. Bramwell. Of the one hundred and eighty-three illustrations one-third are original, and many of them represent the results of careful and thorough microscopic work in the pathology of spinal diseases. The method of case-taking suggested is so useful and sensible that we would be tempted to transcribe it in full if space permitted. The book is especially valuable for the definite and explicit instructions as to the methods of investigating cases. One hundred pages are devoted to this portion of the subject.

Succinct practical directions are given as to the modes of using electricity in the diagnosis of cases of paralysis. Even here the author shows that he has not depended entirely upon the ordinary text-books for his matter, but has called upon experience and has gone to current literature for his facts. He notes, for instance, that in most cases of spastic paralysis which he has had the opportunity of examining, simple diminution, instead of simple increase, in the electrical reaction has been present. A brief account of the partial form of the reaction of degeneration described by Remak and Erb as occurring in subacute atrophic spinal paralysis is also given. In this curious condition every kind of direct and indirect excitation of the muscles, even instantaneous stimuli, invariably produce sluggish contractions.

Valuable tables of differential diagnosis are scattered throughout that part of the book which discusses special diseases of the cord and its envelopes.

In the chapter on "Concussion of the Spinal Cord, with Special Reference to the Spinal Symptoms which Result from Railway Collisions and the Method of Investigating Railway Cases," fortunately for scientific medicine, the work of Mr. Herbert Page has been drawn upon for the bulk of the matter, rather than the brilliant but too often misleading treatises of Erichsen.

Pseudo-hypertrophic paralysis is discussed in an appendix, because recent observations seem to show that in it the spinal cord may be perfectly healthy.

This book will prove of the richest value not only to the neurologist, but also to the student and general practitioner. C. J. M.

SCLEROSIS OF THE SPINAL CORD: Including Locomotor Ataxy, Spastic Spinal Paralysis, and Other Systemic Diseases of the Spinal Cord: Their Pathology, Symptoms, Diagnosis, and Treatment. By JULIUS ALTHAUS, M.D., M.R.C.P., Senior Physician to the Hospital for Epilepsy and Paralysis, etc. With Nine Engravings. New York, G. P. Putnam's Sons, 1885. Pp. 386.

This work is the best exposition of the general subject of spinal sclerosis which has been placed before the profession. It embodies the results of many years of rich clinical experience.

Sclerosis is defined as "an irritant morbid process, standing intermediate between inflammation and simple atrophy, which invades certain well-defined and evolutionally, anatomically, and physiologically distinct areas or systems of that organ, and which leads in course of time to disintegration and wasting of the nerve-tubes, very generally to

partial or complete destruction of the axis-cylinder, and to overgrowth of connective tissue." This is perhaps as good a general definition of the much used and much abused term. sclerosis, as could well be framed.

One charm of the book is the philosophical manner in which the subject is often treated. After showing that normally the different conducting-paths in the spinal cord are laid down and developed in an absolutely systematic manner, he asserts his belief that this initiation and development of nerve-fibres is in some cases carried out in a deficient manner, and this may later on lead to disease of the imperfectly formed or not fully protected parts. "As there are born statesmen, artists, and criminals," he says, "so there are no doubt some born to be sclerosed, and these are in general the descendants of the syphilitic, the gouty, and the alcoholized."

For a book on the general subject of spinal sclerosis, an undue amount of space would seem to have been given to tabes dorsalis. A few new features with reference to spastic paralysis are brought out. For that most difficult problem, the differential diagnosis of spastic paralysis due to sclerosis from hysterical spastic paralysis, Althaus suggests that a dynamometer, which he has had constructed for measuring the force in the lower extremities, will at least in a certain number of cases enable us to distinguish between the functional and the structural form of spastic paralysis. In the former, although the patient may be unable to walk, the dynamometer often indicates a considerable degree of muscular power.

The question of the syphilitic origin of tabes is discussed with great fulness. He favors the view that most but not all cases are due to syphilis. He does not regard it as fair to exclude statistics altogether. His own cases gave a percentage of 86.5 in favor of syphilis. In this, as in other sections, the book is strong in well-recorded clinical histories. He concludes that in many cases no other cause but syphilis can be found for the evolution of tabes, while in others a variety of injurious influences appear to act together with the syphilitic dyscrasis in leading to the outbreak of this complaint. Cold, over-exertion, accidents, venereal excesses, drink, and tobacco-smoking are other causes which act either alone or with syphilis.

Curious, and highly instructive with reference to etiology, are the accounts given of the production of tabes from the eating of bread contaminated with ergot of rye, and of spastic spinal paralysis from bread mixed with the meal of the grain of *Lathyrus cicera*.

The symptoms of tabes are discussed in a chapter of no less than one hundred and forty-four pages. It is a model of minute, elaborate, accurate clinical work. Nothing would seem to be left to be told. Knee-jerk, lightning-pains, Argyll-Robertson pupils, mydriasis, ocular palsies, anosmia, hyperosmia, amblyopia and amaurosis, scotomata, color-blindness, optic atrophy, derangements of the auditory nerve, vertigo, trigeminal anæsthesia, hemi-atrophy of the tongue,—these are but *a few of the symptoms of the first stage* of the disease as described by this painstaking author! Verily, nowadays to know thoroughly *one* disease, especially if it be of the central nervous system, is almost enough for the lifetime of ordinary mortals.

After mercury for the syphilitic dyscrasia, galvanism to the spine is given a high place in the treatment of tabes. He has come to regard nerve-stretching as, under any circumstances, a hazardous operation in tabes.

C. J. M.

GLEANINGS FROM EXCHANGES.

CHOLERA VACCINIA.—Some interesting and important experiments with attenuated cholera virus have been made by Dr. Ferrán, of Barcelona. Two medical men, Drs. Serañana and Jacques, were inoculated with the virus. At 5 P.M. the former was inoculated with half a cubic centimetre of the fluid in each arm. At 7.30 he began to feel severe pain in the backs of the arms, preventing their free action. This pain was subject to temporary exacerbations, and at 11 P.M. pyrexia commenced (we are not told whether the thermometer was used), manifested by malaise, a burning heat, an irregular pulse of 100 per minute, insomnia, and slight headache. He was, however, able to attend to his practice the following day, though the symptoms continued till eight o'clock in the evening, when they suddenly disappeared. Dr. Jacques was inoculated with half a cubic centimetre of the same fluid in one arm at 4 P.M., and experienced the same symptoms as his colleague, with the addition of a slight rigor and some nausea. Dr. Bertran y Rubio also—a member of the commission appointed by the Royal Academy of Medicine to investigate Dr. Ferrán's researches—willingly submitted to inoculation, and with results similar to those obtained in the cases of Drs. Serañana and Jacques, and, like them, without any subsequent evil effects. These experiments form part of a series of micro-biological researches suggested by the Royal Academy of Medicine of Barcelona, and they were performed in the presence of the commission, to whom Dr. Ferrán exhibited a microscopical preparation of the liquid injected and of Dr. Serañana's blood eighteen hours after the inoculation, in which micrococci were detected. Dr. Ferrán also put a couple of drops of the liquid attenuation into half a glassful of water and drank it. In order to render these experiments complete, it remains to be proved that such inoculations confer immunity from subsequent similar inoculations, and, what is of

more importance still, from inoculation of the cholera virus itself. These researches are to be shortly undertaken; and the *Independencia Médica*, to which we are indebted for the above account, predicts that Dr. Ferrán will be successful in his attempts to free mankind from cholera and other contagious diseases by means of inoculations of attenuated virus. —*Lancet.*

MISCELLANY.

AN ACT *to establish a State Board of Health for the better protection of life and health and to prevent the spread of contagious and infectious diseases in this Commonwealth.**

SECTION 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania in General Assembly met, and it is hereby enacted by the authority of the same*, That the Governor, by and with the advice and consent of the Senate, shall appoint six persons, a majority of whom shall be physicians of good standing, graduates of regularly-chartered and legally-constituted medical colleges, and of not less than ten years' experience in the practice of their profession, and one of whom shall be a civil engineer, who, together with the secretary, the mode of whose appointment is hereinafter provided for, shall constitute and be designated as the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. Of the six persons first appointed, two shall serve for two years, two for four years, and two for six years from the first day of July next following their confirmation; and the Governor shall thereafter biennially appoint, by and with the advice and consent of the Senate, two persons, of the same professions as those whose terms of office have just expired, to be members of said board, to hold their offices for six years from the first day of July next following their confirmation and until their successors are appointed, excepting the secretary, who shall continue in office as hereinafter provided, but any member may be re-appointed. Any vacancy occurring in said board during a recess of the Legislature shall be filled by the Governor until the next regular session of the same.

SECTION 2. As soon as possible after the appointment of the first six persons as aforesaid, they shall meet in the office of the Secretary of the Commonwealth, and shall proceed, under the direction of the latter officer, to determine by lot which of them shall serve for the respective terms of two, four, and six years. Before entering upon the duties of the office they shall take the oath prescribed for State officers by the Constitution of the State, and shall file the same in the office of the Secretary of the Commonwealth, who, upon receiving the said oath of office, shall issue to each a certificate of appointment for his respective term of office, determined as aforesaid; upon receiving which they shall possess and exercise the powers and perform the duties of said board as defined in this act. Immediately after having taken the oath of office they shall organize by electing one of their number to be president, and by appointing a proper person, who shall be a physician of good standing, of not less than ten years' professional experience and a graduate of a legally-constituted medical college, to be secretary of said board, who shall hold his appointment until removed by the appointment of his successor or otherwise. The board may elect one of its own members secretary, in which case the vacancy thus created shall be filled by the Governor in the same manner as a vacancy caused in any other way. The president shall be elected annually. No member of the board, except the secretary, shall as such receive any salary, but the actual travelling and other expenses of any member while engaged on the actual duties of the board shall be allowed and paid on presentation to and approval of the Auditor-General of an itemized account, with vouchers annexed.

SECTION 3. The secretary shall be the executive officer of the board, and shall have all the powers and privileges of a member of said board, except in regard to voting upon matters relating to his own office and duties as secretary. He shall receive an annual salary of two thousand dollars, which shall be paid him in the same manner that salaries of other State officers are paid, and such necessary expenses as the Auditor-General shall audit, on presentation of an itemized account, with vouchers annexed, and the certificate of the board, shall be allowed him.

SECTION 4. The said board shall meet at least once every six months, and may also hold special meetings as frequently as the proper and efficient discharge of its duties shall require, in the capitol building at Harrisburg (unless otherwise ordered), and the rules or by-laws of the board shall provide for the giving of proper and timely notice of all such meetings to every member of the board. The Secretary of Internal Affairs shall provide and furnish such apartments and stationery as said board may require in the discharge of its duties. A majority of the members of the board shall, at any regular, called, or adjourned meeting, organize and constitute a quorum for the transaction of business.

SECTION 5. The State Board of Health and Vital Statistics shall have the general supervision of the interests of the health and lives of the citizens of the Commonwealth, and shall especially study its vital statistics. It shall make sanitary investigations and inquiries respecting the causes of disease, and

* This bill is now before the House, having passed the Senate.

especially of epidemic diseases, including those of domestic animals, the sources of mortality, and the effects of localities, employments, conditions, habits, food, beverages, and medicine on the health of the people. It shall also disseminate information upon these and similar subjects among the people. It shall, when required by the Governor or the Legislature, and at such other times as it deems it important, institute sanitary inspections of public institutions or places throughout the State. It shall codify and suggest amendments to the sanitary laws of the Commonwealth, and shall have power to enforce such regulations as will tend to limit the progress of epidemic diseases.

SECTION 6. In cities, boroughs, districts, and places having no local board of health, or in case the sanitary laws or regulations in places where boards of health or health-officers exist should be inoperative, the State Board of Health shall have power and authority to order nuisances or the cause of any special disease or mortality to be abated and removed, and to enforce quarantine regulations as said board shall direct.

Any person who shall fail to obey or shall violate such order shall, on conviction, be sentenced to pay a fine of not more than one hundred dollars, at the discretion of the court.

SECTION 7. It shall be the duty of the State Board of Health and Vital Statistics to have the general supervision of the State system of registration of births, marriages, and deaths, of prevalent diseases, and of practitioners of medicine and surgery, to prepare the necessary methods, forms, and blanks for obtaining and preserving such records, and to insure the faithful registration of the same in the several counties and in the Central Bureau of Vital Statistics at the capital of the State. The said board shall recommend such forms and amendments of laws as shall be deemed to be necessary for the thorough organization and efficiency of the registration of vital statistics throughout the State. The secretary of the State Board of Health and Vital Statistics shall be the superintendent of registration of vital statistics as supervised by said board. The clerical duties and safe-keeping of the bureau of vital statistics thus created shall be provided for by the Secretary of Internal Affairs, who shall also provide and furnish such apartments and stationery as said board shall require in the discharge of such duties.

SECTION 8. It shall be the duty of all health officers and boards of health in the State to communicate to said State Board of Health copies of all their reports and publications, and also such sanitary information as may be requested by said board. And said board is authorized to require reports and information (at such times and of such facts, and generally of such a nature and extent as its by-laws or rules may provide) from all public dispensaries, hospitals, asylums, infirmaries, prisons, and schools, and from the managers, principals, and officers thereof, and from all other public institutions, their officers and managers, and from the proprietors, managers, lessees, and occupants of all places of public resort in the State; but such reports shall only be required concerning matters or particulars in respect of which it may in its opinion need information for the proper discharge of its duties.

SECTION 9. Said board may from time to time engage suitable persons to render sanitary service, or to make or supervise practical and scientific investigations and examinations requiring expert skill, and to prepare plans and reports relative thereto. But no more than two thousand dollars shall be expended in any one year for such special sanitary service.

SECTION 10. It shall be the duty of said board on or before the first Monday of December in each year to make a report in writing to the Governor of this State upon the sanitary condition and prospects of the State, and such report shall set forth the action of the said board and of its officers and agents, and the names thereof for the past year, and may contain other useful information pertinent to the objects for which it was created, and shall suggest any further legislative action or precaution deemed proper for the better protection of life and health; and the annual report of said board shall also contain a detailed statement of the State Treasurer of all money paid out by or on account of said board, and a detailed statement of the manner of its expenditure during the year last past, but its total expenditure shall not exceed the sum of five thousand dollars in any one year.

SECTION 11. The sum of ten thousand dollars ($10,000) is hereby appropriated from the treasury for the purposes of this act, and the expenditures properly incurred by the authority of said board and verified by affidavit, subject, however, to the limitations hereinbefore imposed, and shall be paid by the treasurer upon the warrant of the Auditor-General.

SECTION 12. This act shall take effect immediately, and all acts or parts of acts inconsistent herewith shall be and are hereby repealed.

WORK OF THE ILLINOIS STATE BOARD OF HEALTH.—In connection with the Sanitary Survey of the State and the House-to-House Inspection now being prosecuted under direction of the State Board of Health with reference to the probable appearance of Asiatic cholera in this country, the Board has just issued Circular-Letter No. VI., addressed to County Clerks, and requesting that the work of getting the public institutions into good sanitary condition be completed with as little delay as possible. Much work of this character was done during the past summer and

fall, in response to the circular-letter of the Board issued in July last. But, in addition to what remained to be done when cold weather suspended operations, there must since have accrued, in many cases, accumulations of filth and refuse which should now be promptly removed; defects in plumbing, drainage, and sewerage disclosed during the winter should be repaired; and the effects of the occupancy of dormitories, workshops, wards, cells, and other apartments should be remedied by a thorough spring cleansing.

The officers in charge of almshouses, jails, and all other public buildings under control of the County Board are notified to commence this work at once. Very much that requires to be done—scrubbing, whitewashing, removal of garbage and refuse, the emptying and disinfection of vaults and cesspools, the opening up and cleaning out of drains, sewers, and ditches—can be performed by the employees and inmates of the institutions.

Especial attention should be given to the location and condition of privies and water-closets at these places, as also at court-houses and elsewhere. Vaults should be emptied before warm weather makes such work dangerous, and then be thoroughly disinfected with sulphate of iron (copperas). Where these vaults are within fifty feet of any source of water-supply—well, spring, pond, lake, or running stream—their further use should be abandoned, and, after being emptied, they should be disinfected and filled up with clean, dry earth,—one of the best disinfectants. The new vault should not be less than fifty feet from the nearest water-supply; should be water-tight; ventilated by a four-inch shaft opening above the roof; the contents should be kept inoffensive by the use of some cheap disinfectant; and the building and its surroundings should be kept in the cleanest attainable condition. Where practicable, the substitution of the earth-closet system for the subterranean vault-storage is recommended. In either case the frequent removal of the contents, and their safe disposal by use as fertilizers, are necessary sanitary measures.

The source of the water-supply, and its storage and distribution, should be carefully inquired into, and all possible causes of pollution should be removed. A pure water-supply is of the first importance to health under all circumstances, but among numbers of persons living under the conditions which obtain in county institutions its importance is increased. Epidemics of diarrhœa and dysentery may be caused by impure water, while typhoid fever and Asiatic cholera are spread more commonly through the water-supply than in any other way.

These remarks and suggestions will indicate the character of the work which the Board considers it desirable should be accomplished before warm weather sets in, not alone through fear of cholera, but in the interest of public health, and, consequently, of true economy.

A similar circular was recently issued to railroad managers, setting forth that the spread of Asiatic cholera is due oftener to the pollution of the water-supply than to any other one cause. There is no commoner mode of such pollution than through foul, badly-constructed, and improperly-located privies and water-closets. The disease, in this country, being always due to importation, and its spread being most commonly by persons travelling from place to place, it follows that railway privies and water-closets are especially exposed to the danger of cholera-infection. In view of these facts, it is requested that all such places in connection with stations, freight-houses, shops, and round-houses be at once inspected and put in good sanitary condition. Responses have been received from nearly all the roads, and one of the most important lines has already completed the work indicated along the entire extent of its road.

The Malady of General Grant.—So many contradictory statements have been made regarding the nature of the disease with which the veteran General Grant, ex-President of the United States, is afflicted that I thought your readers would like some authentic report on the subject. For this purpose I visited Dr. George R. Elliott, of 105 Madison Avenue, who has made microscopic preparations of the morbid growths removed from General Grant's throat and examined them at his leisure. The following is his report, written for the *Lancet* at my request:

"The disease is not extensive, the ulcerations being limited to the right pillars of the fauces, the anterior one being perforated near its base. The adjoining side of the tongue is but slightly indurated, as is also a neighboring gland. The case being somewhat unique in its development and progress, a microscopical examination of a small portion of the growth was deemed advisable as an aid in arriving at an exact diagnosis. General Grant readily consented to the removal of a piece for this purpose, and a portion about the size of a pea was taken from the ulcerated edge by Dr. F. C. Riley at the request of Dr. J. H. Douglas. This specimen was rapidly hardened in alcohol, and at the end of thirty-six hours sections were made, stained, and mounted for examination. The following histological findings were readily made out. The structure is largely composed of epithelial tissue, which in places appears in the form of distinct lobules. In portions of these lobules the cells are grouped in concentric globes or cell-nests. The individual epithelial elements present great multiformity in shape, and lie in close contact with each other. Marked evidence of cell-proliferation is seen in the deeper layers of the specimen. There is a

more or less complete stroma or framework running through portions of the growth, composed of fibrous tissue rich in small round cells. By way of summary, thus: the more or less lobulated appearance of the epithelial mass, the grouping of the epithelial elements into concentric globes, the great diversity in the shape of the cell-elements, the evidence of cell-proliferation, and the peculiar arrangement of the stroma, would warrant a diagnosis of epithelioma of the squamous variety. The specimen was removed on February 18, 1885, and the report submitted on February 23. The diagnosis was arrived at only after the greatest possible care had been taken to exclude all sources of error, with a full knowledge of the clinical history and with a mind anxious to find only the microscopical evidence of a benign or innocent growth. After rendering the report the specimens were shown to Dr. T. E. Satterthwaite, the well-known pathologist, who fully confirmed the diagnosis. Upon request they were also exhibited to the eminent gentlemen of the consulting staff,—viz., Drs. Fordyce Barker, H. B. Sands, J. H. Douglas, and G. F. Shrady."

With this detailed report you will, doubtless, be in a position to draw your own conclusions as to General Grant's condition. My own impression is, after a careful examination of the microscopical preparations and consultation with Dr. Elliott, that there is nothing in the nature of the disease that is likely to kill General Grant at an early date, although the failure of his general health may precipitate a crisis at any time. Stimulants do not act kindly, and cocoa only has been administered with success. Still, if the general tone of his system could be maintained, his naturally strong constitution may enable him to combat the ravages of the disease for some time. If an early fatal termination of the case should happen, it will probably be due to the invasion of his sick-room by some half-dozen physicians and reading the exaggerated reports which are daily printed in the public press.—*Correspondence in London Lancet.*

JEFFERSON MEDICAL COLLEGE.—The sixtieth annual commencement of the Jefferson Medical College was held at the Academy of Music on the 2d inst., at which the degree of Doctor of Medicine was conferred upon one hundred and seventy-six graduates. The valedictory address was delivered by Prof. Wm. H. Pancoast.

The Alumni Association of the College had its annual meeting the evening before the commencement. Dr. Addinell Hewson was elected president. The annual oration was delivered by Prof. J. W. Holland, of Louisville, Kentucky, on "Our Personal Equations," which appears in full on another page. (See pages 521–526.)

MEDICO-CHIRURGICAL COLLEGE.—The Medico-Chirurgical College held its annual commencement at Association Hall on April 2. The valedictory was delivered by Prof. Gerhard. The doctorate was conferred upon five graduates by Prof. James E. Garretson, who announced, as a result of the thorough examination, clinical, oral, and written, that out of a class of nine candidates for the degree four had been rejected.

MEDICAL JURISPRUDENCE SOCIETY.—Mr. Clark Bell, of New York, read a paper before the Medical Jurisprudence Society of Philadelphia on the 14th inst., entitled "Shall we Hang the Insane who have committed Homicide? A Criticism on the Execution of Dr. Beach."

THE AMERICAN SURGICAL ASSOCIATION will meet in Washington, D.C., on April 21, 22, 23, and 24. A large number of interesting communications appear on the programme.

NOTES AND QUERIES.

OBITUARY.

JAMES L. LITTLE.—It is with regret that we notice the death, on the 4th inst., of Dr. Little, of New York, a distinguished surgeon and successful practitioner. He died at the age of 44 years, after a few days' illness, with peritonitis. The death of such members leaves the profession palpably poorer.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 29, 1885, *TO APRIL* 11, 1885.

HALL, WILLIAM R., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month and fifteen days, to take effect when his services can be spared. S. O. 70, A. G. O., March 27, 1885.

GARDINER, JOHN DE B. W., CAPTAIN AND ASSISTANT-SURGEON.—Ordered for temporary duty at Fort McHenry, Maryland. S. O. 64, Department of the East, March 28, 1885.

BIART, VICTOR, CAPTAIN AND ASSISTANT-SURGEON.—Leave of absence extended six months, on surgeon's certificate of disability. S. O. 77, A. G. O., April 4, 1885.

CAPTAIN STEVENS G. COWDREY, ASSISTANT-SURGEON.—From Department of the East to Department of Missouri.

CAPTAIN AUGUSTUS A. DE LOFFRE, ASSISTANT-SURGEON.—From Department of the East to Department of Dakota.

CAPTAIN LOUIS W. CRAMPTON, ASSISTANT-SURGEON.—From Department of the East to Department of the Platte.

CAPTAIN GEORGE H. TORNEY, ASSISTANT-SURGEON.—From Department of Missouri to Department of the East.

FIRST-LIEUTENANT WILLIAM H. ARTHUR, ASSISTANT-SURGEON.—From Department of the Platte to Department of the East.

FIRST-LIEUTENANT M. C. WYETH, ASSISTANT-SURGEON.—From Department of Dakota to Department of the East. S. O. 77, A. G. O., April 4, 1885.

CARTER, E. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted one month's leave, with permission to apply for one month's extension, to take effect upon the arrival of another medical officer at his post. S. O. 30, Department of Arizona, March 23, 1885.

PHILADELPHIA, MAY 2, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE ON PARENCHYMATOUS INFLAMMATION OF THE LIVER.

Delivered at the Philadelphia Hospital

BY EDWARD T. BRUEN, M.D.,

Physician to the Hospital, and Assistant Professor of Physical Diagnosis in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—In the diagnosis of those cases which come before your notice there are two methods to be employed. One is the method of diagnosis by recognition, in which the disease is diagnosed by the salient symptoms which are unmistakable. Examples of such diagnosis would be measles or scarlet fever by means of the eruption, or the diagnosis of tonsillitis by the character of the sore throat.

There is another way of making the diagnosis, and that is by exclusion. Whenever a diagnosis is made by recognition, it is always well to prove its correctness by the diagnosis by exclusion. The former method is, however, much more convenient, as it is the quickest and the one instinctively employed. You look at a case, and you can hardly help forming an idea as to the nature of the malady. After forming such an idea, it should, if possible, be verified by the latter method. I propose to show you how to do this in the case now before us.

This patient, a man, æt. 45, blacksmith by trade, of sober and industrious habits, was admitted to the hospital seven weeks ago, with enlargement of the abdomen and some œdema of the limbs. There was also diarrhœa and indigestion. The indigestion was accompanied with a tongue red at the point, while the back was dry and cracked in different places. There was a good deal of nausea and a considerable accumulation of air in the stomach and intestines, as was shown by the tympanitic percussion-note. There has also been slight jaundice, the traces of which can still be seen.

The course of the case since admission has been interesting, and I shall give you its synopsis before telling you the diagnosis we formed at that time. He has improved so far as the symptoms directly referable to the digestive tract were concerned. They indicated indigestion due to intestinal catarrh. But the general condition has not improved. The abdominal distention has materially lessened, but he has lost flesh.

What symptoms have we to start upon? We had enlargement of the abdomen. This was found to be due chiefly to a collection of gas, but was in part due to liquid accumulation, which was shown by the dull percussion-note heard over the lower zone of the abdomen. This was chiefly recognized when the body was inclined forward. Fluctuation was also detected.

Another point in the diagnosis was that percussion over the liver gave an enlarged area of liver-dulness. At the time that this observation was first made the increased area of hepatic dulness was only determined by percussing with the patient on the side, for when on the back the abdominal effusion interfered with percussion. To-day we find the area of liver-dulness in the nipple-line to be six inches. We have then ascites, enlarged liver, and distinct signs of intestinal catarrh, with diarrhœa and slight jaundice and catarrh of the stomach, as evidenced by the condition of the tongue. These are salient symptoms which accompany the initial stages of a condition known as cirrhosis of the liver. With these points, which made the diagnosis by recognition possible, there were others which rendered it necessary to make the diagnosis by exclusion. There were several reasons why this should be done. I shall refer to the more important of these later, but I shall take up the least important now. There was dropsy of the legs, which is not a usual symptom of enlargement of the liver, and it therefore led us at once to ascertain if there were any condition which would explain this as well as the abdominal effusion. The common cause of dropsy of the legs is a mechanical congestion resulting from cardiac trouble. Examination of the heart showed that its sounds and impulse were satisfactory. The next important factors in the production of dropsy are the kidneys. In the examination of the urine in this case there were certain conditions which might have led to mistake. The

urine contained a few hyaline casts. At first sight it might be supposed that there was some form of Bright's disease. Against this idea there were these important points. In the first place, the secretion of urine, which had been small in amount, increased in quantity until it became normal or a little in excess of normal. In the second place, the specific gravity was high. In Bright's disease, where there is deficient elimination, the specific gravity becomes an important means of determining the renal adequacy, because it is usually decreased in this affection. In this instance the specific gravity was increased, and the urine was dark in color and loaded with urates and other materials: an appearance suggestive of renal congestion rather than Bright's disease. The urine presented these characteristics not for a day or week only, but for some time, and after finding that these general characters continued, although the actual quantity was increased, we concluded that the presence of casts must be explained on some other theory than that of disease of the kidney. The tubules of the kidney, when irritated, can give rise to the exudation of an albuminous material which may appear as moulds of these tubes. It is pretty well demonstrated that casts can occur whenever the kidney-tissue is congested or irritated in any way, and naturally, if we assume disease of the liver, there was a cause for repletion in the renal venous circulation, for in such a condition the kidneys would be called upon to throw off an increased amount of nitrogenous material. We therefore concluded that, practically speaking, the kidneys were nearly normal, although we recognized a certain amount of congestion.

How, then, do we explain the dropsy in the limbs? I think that this was due to the pressure upon the blood-vessels of the accumulation of liquid in the abdominal cavity. This would be sufficient to cause swelling of the lower extremities. Since the patient was put to bed the limbs have been free from swelling.

This is what is meant by diagnosis by exclusion. We have passed in review the other principal causes of dropsy. We have then examined the heart and kidneys, and find in them no cause for the dropsy, while we have a satisfactory explanation in the disease of the liver and the abdominal effusion. It is therefore unnecessary to review the exceptional conditions leading to dropsy,—viz., a defective crasis of the blood, permitting of leakage, vasomotor paresis, etc.

We now come to the other point in the differential diagnosis. Many diseases have a definite cause, and this is particularly true of hepatic disease. If the usual cause of the disease is found to be absent, there is strong reason for supposing that a mistake in diagnosis has been made. This has been the point which has troubled us in reference to this case. Although I had come to the conclusion that an initial stage of cirrhosis was present, yet I could not understand its etiology. Andral, a famous French pathologist, insisted that cirrhosis of the liver was always connected with alcoholism; and this disease has been called in England "gin-drinker's liver," and all sorts of instances have been cited to show the connection between cirrhosis and alcoholism. In cirrhosis of the liver there is an increase in the connective tissue of the organ, resulting from the irritation of the hepatic tissue from the liquors transmitted from the digestive tract by means of the portal vein. Our patient, however, has never been a drinking man. He is by occupation a blacksmith, and insists upon his temperate habits. It is perfectly true that there are one or two other causes of cirrhosis. It occurs in individuals addicted to the use of highly-seasoned food; but this patient has never been a high liver, nor prior to this attack has he suffered much from indigestion. Cirrhosis has been found in the lower animals, showing that it may occur independently of the causes which I have mentioned. Still, the case was obscure, on the idea that cirrhosis was primarily connected with hypertrophy of the connective tissue throughout the liver. There is one other cause of hypertrophy of this connective tissue, and that is repeated gastric catarrhs with jaundice; but in such cases there is marked jaundice, which has been absent in this case. Therefore we could find no explanation for the disease if it started primarily in the connective tissue, and must style it idiopathic.

Some researches into the etiology of the pathological changes in the development of cirrhosis have been made in which a comparison has been drawn between parenchymatous disease of the kidney and the liver. Practically speaking, we have

two diseases of the kidney,—viz., hypertrophy of the connective tissue between the tubules, which results in granular contracted kidney, and parenchymatous nephritis, in which the disease starts in the cells of the tubules, causing swelling of the whole organ and leading to what is termed large white kidney. In many cases, however, primary changes within tubules are associated with interstitial proliferation, which may finally prove the predominant changes. It has been thought that cirrhosis of the liver may begin in its parenchyma, that is, in the hepatic cells, just as it may begin in the cells of the kidney. In other words, it has been supposed that the disease may begin in the liver-cells, and the irritation thus produced lead secondarily to hypertrophy of the connective tissue.

You will ask, What has this to do with the case before us? I think a great deal. Parenchymatous nephritis is possible from some poisonous material in the blood acting upon the cells of the tubule of the kidney. Parenchymatous disease of the liver may be due to some poisonous product of partial digestion, that is, some imperfectly reduced albuminoid, which, passing in greater abundance through the liver than can be dealt with by this gland, can make an impression upon the cells, causing cloudy swelling and enlargement, and the connective tissue become secondarily involved. This man, having been a blacksmith, a poor man, and not able to select his food with care, has made himself liable to have irritation of these cells from subacute indigestion, although he has not made himself liable to cirrhosis from the use of alcohol.

Another point. When cirrhosis is due to alcohol, it begins gradually and extends over a period of two or three years. This man, as far as he knows, has been sick only a few weeks. We can see how this disease may develop rapidly, just as we know tubular nephritis may originate in a similar period of time. I think we get rid of the etiological objection to the diagnosis in this case if we can consider the disease as beginning in the liver-cells. I refer to this matter rather carefully, for I do not think you always have the possibility of the occurrence of parenchymatous cirrhosis sufficiently dwelt upon in your lectures.

What is the process of development in these cases of parenchymatous cirrhosis? The irritation of the hepatic cells causes cloudy swelling and enlargement. This is followed by irritation of the connective tissue, and as the connective-tissue increase occurs pressure is exercised upon the hepatic cells, the size of the liver is reduced, although at first the liver is enlarged.

What has been the result of treatment in this case? When, four weeks ago, we tapped the abdomen and drew off the liquid, he improved. If in this case there had been extensive increase of connective tissue, I do not think that the man would have been benefited by tapping, for then there would have been a permanent obstruction of the radicles of the portal vein. There were no enlarged veins over the abdomen, as is usually seen in cirrhosis due to obstruction of the portal circulation. When cirrhosis has lasted for any length of time, these venous dilatations are always present, and are due to the collateral circulation through the hemorrhoidal and hypogastric veins, the veins of the stomach and the œsophageal; also the vein that Sappey has described, arising from the left branch of the portal vein and passing up the falciform ligament close to the ligamentum teres to join the epigastric and internal mammary veins. If the obstruction has been due to parenchymatous swelling and secondary interstitial proliferation, we could have ascites; and yet, if the obstruction has not been long enough continued to cause development of the collateral circulation, removal of the accumulation will facilitate the circulation through the liver and may afford a chance of improvement.

There is another clinical point, and that is in regard to the slight jaundice which was present at the first period of the case. Jaundice is nearly always due to obstruction,—that is, to obstruction to the main or other bile-ducts, as from catarrhal inflammation. The bile which is then formed in the liver is reabsorbed and taken into the circulation, causing staining of the tissues. In this patient we have had some intestinal catarrh at the commencement of the case, and I think the jaundice was due to obstruction of the ducts. Since then he has had no jaundice simply because the liver has not formed bile in large amount. Why do I say that the liver is not forming bile? Because throughout the course of the case tympa-

nites has been a prominent symptom. This might be referred to venous repletion of the intestinal radicles of the portal system, with decomposition of food secondary to imperfect elaboration of intestinal juices. Flatulence also may result from imperfect absorption of air by the mucous membranes, by swallowing of air and subsequent passage into the intestines. But there has been more flatulence than is usual where the biliary secretion is present in reasonable amount, and the other causes we have excluded by treatment. When I say that jaundice is commonly due to obstruction, I mean to say that it is never due to suppression. It used to be supposed that the biliary matters existed preformed in the blood. I have not time to go thoroughly into this matter, but there are two points which show the impossibility of this view. In the first place, there is not enough coloring-matter in the blood to color all the bile which is secreted by the liver. In the second place, the liver can be entirely removed in animals without the supervention of jaundice. These points show that jaundice from suppression is a fallacy. Those cases in which there is jaundice with no obstruction in the ducts are now explained by the physiological fact that when the bile is poured into the intestine in normal amount, such portion as is not used is absorbed and excreted by the lungs and other emunctories. The failure of these emunctories to excrete the bile is therefore the cause of jaundice in those cases where there is no obstruction.

What shall be the treatment in this particular case? The treatment of cirrhosis is very interesting. In the first place, it is chiefly important to attend to the diet, which should contain as few starches and fats as possible, and should consist of milk and albumen in such form as is readily digested with the least amount of digestive activity. Valentine's beef-juice and beef-extracts are suitable. The next factor is to keep the bowels open, and I should always give some form of tonic laxative, such as the following:

℞ Ferri sulphatis, gr. ij;
Magnesii sulphatis, gr. xlv;
Infus. quassiæ, ℥ss. M.

Sig.—This is one dose, and is to be taken in half a glassful of cold or warm water in the morning before breakfast.

If the cirrhosis is of the ordinary variety, I should do nothing further, and unless tapping were called for by the dyspnœa, I should postpone it. In such cases the effusion immediately recurs, and the tapping removes a large amount of albuminous liquid. On the other hand, if I thought that the cirrhosis was causatively more parenchymatous than interstitial, I should tap, because by relieving portal congestion we should facilitate the circulation in the liver and the repair of the cells.

I propose this morning to tap this man. It is better to incise the skin, as it facilitates the introduction and the withdrawal of the canula. The fluid which escapes is clear and highly albuminous. I think this will not reaccumulate for some time. We shall pursue the treatment with diet and the tonic laxative to which I have referred, and shall again show you the case in a fortnight.

April 1.—Gentlemen, you will recall this case, which I presented to you two weeks ago. At that time I made the diagnosis of cirrhosis with enlargement of the liver, caused by a process beginning in the liver-cells, this being followed by irritation of the connective tissue, and that the primary cause of irritation of the hepatic cells was poor digestion and catarrh of the stomach. This prevented the proper assimilation of food, and flooded the liver with partially-reduced albuminoids. You also remember that at the close of the hour I performed paracentesis, and drew off a considerable quantity of fluid in order to relieve the portal circulation. I tapped because I thought the disease was connected rather with the hepatic cells than with the connective tissue of the liver. In the latter case there is usually such a degree of permanent obstruction of the portal circulation that I think it undesirable to perform paracentesis unless there is severe dyspnœa due to the collection of fluid, for every tapping tends to weaken the patient by drawing off a considerable quantity of albuminous liquid. I thought that in this case, by removing the pressure on the portal circulation we would facilitate the circulation through the liver and permit the cells to regain their normal condition.

So far as the portal obstruction is concerned, I think that we have had reasonable success. The fluid accumulation has not returned, but since he was before you there has been one complication which I think bears out the diagnosis. One week

ago the man had a severe clonic convulsion. Last night he had another. These were general in character, and accompanied by all the phenomena of uræmic convulsions. It is proper to state that the patient had never suffered from any form of simple epilepsy, had never been subjected to brain-disease, and, as far as we can ascertain, never had syphilis.

Epileptiform convulsions may occur from a great variety of causes, but he has had none of the ordinary causes. We therefore turn to the condition of the circulating-fluid to find an explanation for these seizures. In order that you may thoroughly appreciate what I have to say on this point, I want to remind you of two interesting facts. One is that the ordinary peptones which are formed in the stomach in the digestion of the albuminoids are capable of causing convulsions if removed from the stomach and injected into the circulation. Another fact is that the virus of serpents, if swallowed, will pass through the circulation without producing the symptoms of poisoning which it would if it were injected into the blood. The poison is in some way modified by passing through the hepatic circulation, so that it is no longer virulent. I think that these two physiological facts have an important bearing on the diagnosis in this case. Let me refer to one or two more physiological data. When the albuminoids are taken into the stomach they are there changed into peptones, and these are broken up into a number of other combinations. The object of this change is to fit them for dialyzation through the mucous membrane of the intestine and to enter the portal circulation. When these peptones have entered the portal vein, they go to form the globulin of the blood, and in part the glycogen, which is stored up in the liver. We know that if the albuminoids were passed directly from the stomach and intestines into the portal circulation, without being acted on by the gastric and intestinal secretions, they would not enter the circulation in an assimilative form. This may be illustrated by a fact which you well know,—viz., that a lump of rock-salt will not dissolve so quickly in water as the same weight of table-salt, which on account of its fineness will diffuse more quickly through the water. Again, it has been shown by laboratory experiments, particularly by those of Brunton, that if you take a membrane prepared with tannate of gelatin it will allow dialyzation through it of compounds having a certain molecular weight only. It is found that a solution of nitrate of barium having a molecular weight of 130.6 will pass through this membrane, while a solution of ferrocyanide of potassium having a molecular weight of 211.4 would not pass through.

Applying these facts to the case in hand, we see how important it is that proper digestion should go on in the stomach and intestines, so that the food absorbed may be received into the blood in a condition in which it may be appropriated by the tissues, and we see that when the peptones and other substances produced by the digestion of starches enter the circulation imperfectly reduced, they are capable of causing serious symptoms. I wish to call particular attention to this point. The name of the portal vein is, as you well know, the vena porta. It was so called by the ancients because they recognized how many disturbances were due to what they called biliousness, and attributed to inefficient action of the liver. In reality, they were more nearly right than they thought. I attribute this man's whole trouble not to ordinary cirrhosis, for he had not been subjected to the causes of interstitial cirrhosis. He had, however, been subjected to a poor dietary, and had suffered with indigestion, and these were connected, I believe, with degeneration of the hepatic cells. To corroborate this view, we have the convulsions. We know that uræmic convulsions are not due simply to the urea, but to the retention of partly-reduced albuminoids in the system. Cholestrinic (so-called) convulsions are dependent on a deficient action of the liver, and are due to the fact that the substances which should be reduced by the liver into globulin and glycogen are not so reduced, and pass into the blood probably as some form of peptone and produce convulsions. For, as I stated at the last lecture, the urine of this man has always been loaded with urates and of high specific gravity.

You will, therefore, do well to remember that convulsions are possible when the kidneys are normal, and may complicate hepatic disease, and in such cases are due to the entrance into the blood of partially-reduced albuminoids, which, being incapable of exchanging their nutritive materials with the waste products of the system,

bring on convulsions through the circulation.

If we thoroughly appreciate these facts, we can see what would be the proper line of treatment and what would be the outlook. I think that the prognosis is not seriously complicated by the occurrence of these convulsions. Regarding them as symptoms of deficient hepatic function not necessarily speedily fatal, we treated him by purging to get rid of any partially-digested matters in the intestinal canal and to quicken the circulation through the liver. We also recognized that a quantity of this material was stored up in the blood, and we therefore caused sweating with jaborandi. Jaborandi does more than simply to produce sweating. It favors the elimination of the solids of the blood, which pass off with the sweat. In many cases it is proper to give jaborandi even when the patient is bathed with perspiration. This might be thought to be a contra-indication, but the skin may be moist from weakness, poor circulation, and other causes. Jaborandi causes sweating, which carries off effete nitrogenous materials.

I look forward, under the above treatment and a proper diet, to the recovery of this patient from the immediate symptoms and to the palliation of the progress of a serious disease. In a general hospital it is difficult to control the diet as we wish, and I find that yesterday the patient did not confine himself to the milk-diet, but also took meat, which may have had some influence in determining the convulsion which he had last night.

ORIGINAL COMMUNICATIONS.

RECENT LEGISLATION WITH REGARD TO ADULTERATION OF FOOD AND DRUGS.

BY HENRY A. RILEY, ESQ.,
New York City.

LAWS relating to adulteration of food and drugs constitute a very interesting chapter in modern legislation. So recent, indeed, are these laws that few dating back more than ten years are of value either in detecting or in punishing adulteration. In 1875 the first comprehensive and practical law in England was enacted, although in 1860 a statute was passed which was of use as an experiment. It had, however, so many faults that it accomplished little in stopping the evil it was aimed against. But it must not be imagined that adulteration is a device of so recent a date as 1860.

So far back as the time of Henry III., in the thirteenth century, there was a law forbidding the harmful mixture of foreign substances with the wares of bakers, butchers, vintners, grocers, and others, and in the time of the Roman Empire Pliny tells us that opium was adulterated with the juice of other plants, and inspectors were appointed in Athens to examine the wine-supply. In the time of Henry III. a statute called "The Pillory and Tumbrel" (ducking-stool), from the kind of punishment adopted, was passed, and was on the English statute-book for several centuries. The examination of bread in order to secure a pure article was an important feature of this law. Immediately after the feast of St. Michael in each year was held what was called the assize of bread, and four discreet men made an examination of the samples offered for sale, prescribed rules for properly mixing the loaves, and established a price. These rules were then in force for the current year.

At the close of the thirteenth century we find the following statement of the way in which punishment was inflicted in London: "If any default shall be found in the bread of a baker in the city, the first time let him be drawn upon a hurdle from the Guildhall to his own house, through the great street where there be most people assembled, and through the great streets which are most dirty, with the faulty loaf hanging from his neck; if a second time he shall be found committing the same offence, let him be drawn from the Guildhall through the great street of Cheepe in the manner aforesaid to the pillory, and let him be put upon the pillory and remain there at least one hour in the day; and the third time that such default shall be found, he shall be drawn, and the oven shall be pulled down, and the baker made to forswear the trade in the city forever." In 1316 there was an ordinance that "no one should mix any manner of wares, that is to say, shall put old things with new or new things with old, by reason whereof the good thing may be impaired by the old; nor yet things of one price or of one sort with other things of another sort."

The guilds of the Middle Ages had great powers over the various trades and occupations, and their regulations had much of the character of statutes. These regulations, together with the formal statutes, seemed to be sufficient in the great majority of cases to check adulteration. And it was not until quite recent times that adulteration played much of a part in the manufacture and sale of either food or drugs. In this century population had become so dense that the secret arts of the adulterator opened up new channels for commercial profit, and the business principles of the great majority of tradesmen were not proof against the temptation. Carlyle with his trenchant pen thus compares the old with the new:

"What a contrast between now and say only a hundred years ago! At that date, or still more conspicuously for ages before that, all England awoke to its work with an invocation to an Eternal Maker to bless them in their day's labor and help them to do it well. Now, all England—shopkeepers, workmen, and all manner of competing laborers—awaken as with an unspoken but heartfelt prayer to Beelzebub, 'Oh, help us, thou great lord of shoddy, adulteration, and malfeasance, to do our work with the maximum of slimness, swiftness, profit, and mendacity, for the devil's sake,' and an amen."

Between 1851 and 1854 there was quite an agitation in England on the general subject of adulteration, the lead in the discussion being taken by the great medical paper, the *Lancet*. This agitation brought on an official investigation by a Parliamentary committee, and the result of the investigation was the enactment of the law of 1860. This law was amended several times, but did not seem to meet the requirements of the case, and in 1874 a new Parliamentary committee conducted the most scientific examination of the subject made up to that date, and secured an amount of data concerning the extent and character of adulteration which has been of great value. The result of this investigation, so far at least as concerns food, was to the effect that a great deal of adulteration was practised, but that the character of it was not well understood. The committee reported that the public was being cheated rather than poisoned by the wares offered for sale. A bill was at once introduced embodying the suggestions made by this committee, and it became a law in the following year. This law, with some amendments adopted in 1878 and 1879, is now the law for Great Britain.

The main features of the statute are as follows: All persons are forbidden to mix, color, stain, or powder any article of food with anything injurious to health, or by use of similar methods to affect drugs so as to weaken their quality or potency, under a penalty of fifty pounds for the first offence, and for succeeding offences of imprisonment not to exceed six months. Lack of knowledge of the adulteration, if such knowledge could not be acquired with reasonable diligence, relieves from responsibility. Analysts are appointed to make examination of suspected articles of food, and a refusal to sell the articles for the purpose of analysis is punished by a fine. If a vendor is convicted of selling adulterated food or drugs and he has a warranty of good quality from the manufacturer, he can recover his fine and expenses from such manufacturer.

A false warranty makes the giver liable to a penalty of twenty pounds, and a person applying a warranty to an article other than the one intended is also liable to a fine of twenty pounds.

This law has been of great value in securing knowledge of adulterations and in informing the public of the character of articles sold in the public markets, but statistics of prosecutions and convictions under it are not attainable. It seems defective in not providing any sure standard of quality either for food or drugs, and also in requiring proof of guilty knowledge on the part of the vendor.

In 1881 and 1882 there were 32,708 different samples examined, and of these 5418 were found to be adulterated.

On the Continent, France, Belgium, and Germany have stringent laws against adulteration, most of them of very recent date. In Germany, in 1878, there were 231,478 different samples of food, liquors, drugs, etc., examined, and there were 3352 convictions for violations of the law. The German law does not require proof that the seller knew of the adulteration. In France well-equipped laboratories are provided in the principal cities for the proper examination of suspected articles, and in addition complete photographic outfits are provided, so that ocular demonstration can be made before juries of certain

forms of adulteration. In 1881 there were 6517 samples examined, and the percentage of adulteration was 50.40.

In the United States there is no Federal law on the subject of adulteration, as this is beyond the jurisdiction of Congress except as regards the importation of adulterated articles and their transportation from State to State. In regard to the importation of adulterations there is comparatively little accomplished, as inspectors of sufficient technical knowledge are rarely provided, and rules have not been issued by the Treasury officials directing examinations for the purpose of detecting adulterations. There has been, however, a law on the statute-book since 1848 forbidding the importation of adulterated drugs, and so serious was the evil at that time that in the nine years between 1848 and 1857 there were over 900,000 pounds of spurious and inferior drugs seized and destroyed. At this time it is said that there were establishments in Europe started and carried on for the special purpose of supplying the American market with adulterated drugs.

Up to the time of the war of the Rebellion, adulteration, either in food-products or in drugs, was not a very noteworthy characteristic of commercial dealings, and the frauds practised were in most cases not adulterations at all, but consisted in palming off inferior goods and in giving short weight or measure.

The war brought many evils in its train which peace did not remove, and among them adulteration of food-products is one of the greatest plagues. The demand for foreign products was rather stimulated than diminished by the war, and with the extraordinary demand for army wants the supply did not equal the demand, and consequently an opportunity was opened for fraudulent devices of every kind, and a multitude of persons hastened to take advantage of the opportunity. The habits of extravagance and lavish living formed during war times have remained as one of the legacies of the great conflict, and the frauds then hardly noticed because of greater interests at stake have continued to flourish by reason of lack of popular knowledge of the extent of the practice of adulteration. Many forms of sophistication or weakening require technical knowledge for their detection, and it has not been until quite recently that the public became sufficiently interested to demand laws providing for the careful and systematic examination of food-products.

In some of the States this demand came earlier than in others, and in some it has not yet appeared at all, for there are perhaps half a dozen States which, so far as the statute-books show, do not recognize the fact of adulteration. A large number of the States have organizations known as Boards of Health, and these Boards, where sufficient means have been supplied, have done good service in the investigation of the extent and character of adulterations. In comparatively few instances have they gone much beyond this. The enforcement of the laws and the punishment of offenders is a much more difficult matter than conducting analyses in the laboratory, and up to the present time the legal side of the matter has not had a very brilliant demonstration. The chemical investigation comes first in order, however, for there must be a vast amount of facts secured by patient investigation before adulteration is sufficiently understood to enable proper laws to be framed, and this preliminary condition of affairs had not passed away so lately as 1880, when the National Board of Trade took the matter in hand. Prior to that time some of the States, as Massachusetts and Michigan, had given considerable attention to investigation of frauds in the manufacture of articles of food and had cleared the way for successful legislation.

Shortly after the passage of the English Food-Adulteration Act of 1875 there were published in this country a large number of sensational and extravagant articles relating to deceptions in a variety of commodities of very general use. These articles were very widely copied by the press, and there was created a demand for legislation. Many of the published statements were based upon false or insufficient data, but still the fact remained that adulteration was very extensively and very unblushingly practised.

In 1879 the proprietors of the *Sanitary Engineer*, a paper much interested in public matters of this kind, induced the National Board of Trade to offer prizes for the best essays on the subject of Food and Drug Adulteration, the essays to be accompanied by drafts of proposed legislation. The subject was a comparatively new one in this country, and a year was

given to allow for proper investigation. A committee of award was appointed, consisting of Dr. John S. Billings, U.S.A., Prof. Charles F. Chandler, New York, Ex-Chancellor Williamson, of New Jersey, ——— ———, and A. H. Hardy, Esq., Boston. This committee awarded the first prize of one thousand dollars to Mr. George W. Wigner, of London, one of the public analysts of England and an acknowledged authority on the whole subject.

The report made by the committee contained the interesting comment deduced from the investigations made, that up to that time adulteration was not a serious menace to public health, and that commercial more than sanitary reasons prompted the demand for legislation.

The action of the Board of Trade and the active interest taken by the *Sanitary Engineer* secured favorable consideration for the proposed legislation. Two bills were drawn up, one for national adoption and the other for State use. These bills were very carefully prepared and are models of what a good law ought to be. The Federal bill was presented to Congress in 1881, but the short session of Congress prevented its adoption at that time, although favorably reported, and since that year the bill has not been very earnestly pushed.

In the case of the State bill matters went somewhat differently, for the draft became a law with comparatively few changes in the States of New York, Massachusetts, and New Jersey during the sessions of the Legislatures meeting that year. This law should prove a model in those States where adequate legislation does not yet exist, and its main features will be of interest. The Massachusetts statute in one or two slight particulars is better than the New York one, and the quotations will be from it.

"*Section* 1. No person shall, within this commonwealth, manufacture for sale, offer for sale, or sell any drug or article of food which is adulterated within the meaning of this act.

"*Section* 2. The term 'drug' as used in this act shall include all medicines for internal or external use, antiseptics, disinfectants, and cosmetics.

"The term 'food' as used herein shall include all articles used for food or drink by man.

"*Section* 3. An article shall be deemed to be adulterated within the meaning of this act,—

"(*a*) In the case of drugs: (1) If, when sold under or by a name recognized in the United States Pharmacopœia, it differs from the standard of strength, quality, or purity laid down therein; (2) if, when sold under or by a name not recognized in the United States Pharmacopœia, but which is found in some other pharmacopœia or other standard work on materia medica, it differs materially from the standard of strength, quality, or purity laid down in such work; (3) if its strength or purity falls below the professed standard under which it is sold.

"(*b*) In the case of food: (1) If any substance or substances have been mixed with it so as to reduce or lower or injuriously affect its quality or strength; (2) if any inferior or cheaper substance or substances have been substituted wholly or in part for it; (3) if any valuable constituent has been wholly or in part abstracted from it; (4) if it is an imitation of or is sold under the name of another article; (5) if it consists wholly or in part of diseased, decomposed, putrid, or rotten animal or vegetable substance, whether manufactured or not; or, in the case of milk, if it is the product of a diseased animal; (6) if it is colored, coated, polished, or powdered, whereby damage is concealed or it is made to appear better or of greater value than it really is; (7) if it contains any added poisonous ingredient or any ingredient which may render it injurious to the health of a person consuming it."

The following sections give the State Board of Health, Lunacy, and Charity power to declare certain articles to be exempt from the provisions of the law; to fix the limits of variability allowable in foods or drugs not mentioned in the national pharmacopœia; to appoint the necessary analysts and chemists; to make such rules and regulations as are necessary for the proper carrying out of the law, and requires every dealer to furnish articles for analysis when demanded. The penalty for violation of the law is fifty dollars for a first offence, and one hundred dollars for subsequent offences.

The special features of this law and the similar laws of New York and New Jersey which make them superior to all

others in force are the clear statements defining what are articles of food and drugs, and in what adulteration consists.

With such laws on the statute-book, it is pertinent to inquire whether their technical merits have proved equal to the bitter struggle in the courts which their vigorous enforcement was sure to produce. In Massachusetts, with earnest and intelligent officials to conduct prosecutions, the law has proved not only adequate to determine the guilt, but also sufficient to insure the punishment, of offenders.

A bitter struggle was started in the Legislature a year or more ago to repeal the law, so seriously had it affected the adulterators, and, with the aid of money lavishly expended, nearly succeeded in its purpose. The effort was, however, defeated, and the beneficent features of the act are now so apparent that it is probably now firmly established against any opposition which can be brought to bear.

Dr. Samuel W. Abbott, the Massachusetts Health Officer, stated recently that there was a marked improvement following the efforts of the Board in the quality of all articles formerly adulterated, and that this was especially true of milk.

In 1883 there were fourteen hundred samples of articles analyzed, including three hundred of milk. The percentage of adulteration in articles of food was forty-seven per cent., in milk seventy-eight per cent., and in drugs forty per cent.

There were seventeen prosecutions conducted by the Board, and in fourteen convictions were secured, while in two adulteration was clearly proved, but for technical defects the indictments failed; in the remaining case the defendant died before trial.

For 1884 the full details of work have not been published, but Dr. Abbott says that there were 2644 articles analyzed, and that the law was efficiently enforced, there being fifty prosecutions, nearly all of which were followed by convictions.

In New York the Health Board is a dignified but rather inefficient body, and with a good law back of it the prosecutions have not been very vigorously carried on, although evidences of adulteration are patent on every hand. The report for 1884 has not been published, but in 1883 there were twenty-four indictments found, though only eight convictions were secured. The practicability of enforcing the law is clearly shown by the success attending the efforts of the Dairy Commissioner, Josiah K. Brown, in connection with the oleomargarine law passed at the last session of the Legislature. Less than a year has passed, but in the report just submitted to the Legislature he states that eighty per cent. of the traffic has been broken up, and that sixty arrests have been made, resulting in eleven convictions, four acquittals, and the remainder of the arrested persons are still under indictment or examination in the police courts. If such success attends the working of a law the constitutionality of which is still unsettled in the courts, it is likely that a more vigorous enforcement of the general law would result both in the conviction of offenders and in improvement in articles offered for sale. This is rendered the more probable from the success which has followed the admirable work of Dr. Cyrus Edson, of New York City, in detecting and punishing the adulterations which abound there. The papers have recently contained full reports of his crusade against adulterated candy, and this is only one of the many ways in which his activity has found expression. So much attention, indeed, has this phase of his work attracted that there is now pending in the Legislature of that State a law relating especially to the punishment of adulterating candy. Such a statute is certainly not needed, for the general law is fully adequate to cope with the evil, but what is demanded is more vigor on the part of the public officials.

The whole question of adulteration is becoming more and more important in all of the States, and better legislation than is now generally found will probably result from the agitation.

REPORT ON RECENT PROGRESS IN MEDICAL AND SURGICAL ELECTRICITY.

BY WM. R. D. BLACKWOOD, M.D.,
Electrician and Neurologist to the Presbyterian Hospital.

ELECTRICITY AS A STIMULANT IN CARDIAC AND RESPIRATORY FAILURE.

DR. GRISWOLD, of New York, has made many observations on this point, and reported his views to the New York Academy of Medicine recently.

He insists that stimulation of the heart can be effected only by direct application to the organ. If the current be applied to the cervical pneumogastrics, depression is produced, whether by galvanism or faradism.

Stimulus of the phrenic nerves produces acceleration of respiration, and this procedure was, therefore, proper in itself; yet, because of the close relation of the phrenic with the pneumogastric in the neck, extreme difficulty would be found in separating the action of the current on the two.

ELECTRICITY IN POISONING.

In poisoning from aconite, electrical stimulation of the pneumogastric was harmless because the nerve was already paralyzed, hence the attempt to stimulate the phrenic might be safely made. In this we do not agree with the author, as the pneumogastric cannot truthfully be said to be *paralyzed:* its function is merely interfered with more or less in cases of aconite-poisoning where recovery is reasonably certain. Other means are much better than electricity under all circumstances, and it is simply a waste of precious time to experiment with it.

In chloroform-poisoning electricity at once produces fatal results, even with mild currents, to either the pneumogastric or the phrenic. In ether-asphyxia electrical stimulation was proper, but in opium-poisoning much care was necessary under all circumstances, although the respirations could be maintained by either current.

The reviewer recalls a case (some years ago) in which, after the apparent failure of atropia and alcohol, the respirations were maintained by faradism in a case of opium-poisoning for twelve hours, and the patient saved.

The conclusions, therefore, are as follows: 1. Electrical stimulation of the phrenic nerve should not be undertaken without the reflection that the current will at the same time reach the pneumogastric. 2. Only mild currents should be applied, and their effects carefully watched, but especially with reference to the heart. 3. The sudden and careless application to the neck of a current sufficiently strong to produce pain or muscular contractions in other parts of the body should be especially avoided.

ELECTRICITY IN INTESTINAL OBSTRUCTION.

Bloch, in *Vratch* (*Journal de Médecine de Paris*), relates an instructive case, in which a patient, whose bowels had been confined for a week, suffered from obstinate hiccough and vomiting. All purgatives and enemata failed, and finally electricity was applied by introducing a rheophore high up into the rectum, the other being labile over the abdomen. Ten applications of ten to twenty minutes each were made at intervals of three hours, and a stool followed the fourth application. The hiccough ceased after the first dose. The writer has noted this method several times in the medical press, the last being presented before the Philadelphia County Medical Society in February. Even in cases of invagination he has had success after failure of all other measures.

ELECTRICITY IN STOMACH-DISORDERS.

Dr. Apostoli gives an elaborate and interesting *résumé* of his treatment of epigastralgia, gastralgia, vomiting, and certain nervous affections allied to hysteria, including the vomiting of phthisis and pregnancy. He relies upon electricity in the varied dyspepsias and other non-cancerous affections. He suggests a definite plan as follows:

1. Bi-polar application to both pneumogastrics as near as possible to the clavicle, with a constant, uninterrupted current, the intensity proportioned to the receptivity of the patient and the gravity of the affection. From five to fifteen milliampères through a rheostat is the ordinary amount to be used.

2. The duration is proportional to the character of the disorder, and should be maintained until a definite improvement is felt at each sitting.

3. Galvanism is preferable, and particularly so during digestion, hence a light repast is given before the application. He believes digestion is promoted by electricity, and he advocates frequent repetition of the current in all cases where possible.

For many years past, affections of the stomach, spleen, liver, and pancreas have been subjected to electrical treatment by the reviewer as an adjuvant to other measures, or without drugs of any kind in numerous cases, and in no class of disease has galvanism particularly proved of more service. An account of some common disorders thus treated is given in three articles elsewhere.* The paper of Dr.

* Medical Bulletin, October, November, and December, 1884.

Apostoli is worthy of careful consideration by the general practitioner, and, as it calls attention to a class of diseases which are the bane of practice, the assistance to be obtained from electricity is especially worthy of critical study in private practice. The points to be observed in applications to the neck are already noted above, and every application, if properly made, should be well tolerated and without any consecutive eschar. In order to prevent any pain and all danger of cauterization, the rheophores should be carefully covered with very soft chamois-skin, under which should be placed one or two supplementary layers of moist agaric, to concentrate to it a part of the galvano-caustic action. Any battery will answer, provided that it is furnished with a collector that will admit of a grouping two by two, or, better, one by one. A galvanometer of intensity divided into milliampères must of necessity be inserted into the circuit.

A comparative chemical study of the two processes of galvanization (mono-polar or bi-polar) of the pneumogastric gives the preference to the latter. The unanimous opinion of all the patients who have been called upon to judge between their relative values has been that the simultaneous galvanization of the two vagi nerves in the neck (bi-polar) is the most rapidly active and efficacious.

In conclusion, the continuous galvanic current, well regulated and localized, is the medicine for dyspepsia, gastralgia, or vomiting. If these symptoms be purely nervous or reflex, it exercises an immediate and sovereign action upon them. In all other cases, without supplanting classic therapeutics, it is destined to serve as an active auxiliary.

The curative action incident to a course of treatment in constipated cases is alone worth all the trouble incurred, because in numerous cases the drugs ordinarily employed to overcome this defect have a bad effect on the stomach, retarding its secreting action, and purgatives, as a rule, are much more objectionable than any other remedies. Frequently a small dose of any laxative will sweep away the little gastric or pancreatic juice present, and induce such action as will force the partly-digested food beyond the region in which it should remain until digestion is well advanced, whereas electricity properly applied will provoke the secretion of the various glands, and thus normally induce the onward passage of the ingesta,—not before, but after its digestion.

DIFFERENCE IN THERAPEUTIC EFFECT OF CURRENTS.

Experiments show a difference in effect of faradism and galvanism on vascular neuroses, the former dilating and the latter constricting the dilated vessels. The temperature also is increased by the faradic and decreased by the galvanic current. No difference is exerted with galvanism by altering the direction of the flow.

ELECTRICITY IN GYNÆCOLOGY.

The bi-polar method in treating metritis and chronic affections of the uterus is advocated by Apostoli in *L'Union Médicale*. The method gives more positive effects in any case. It is more readily performed, and the whole benefit is given to the uterus instead of being largely wasted, as in the uni-polar application. The treatment is preferred by patients, as it is less painful under suppression of the cutaneous pole, and stronger currents can be borne, particularly if the intra-uterine pole be kept well up to the fundus. Apostoli, however, seems to employ crude instruments, for he speaks of having several in which the poles vary in their distance apart. Our own plan, for ten or twelve years past, needs one rheophore only, the central or intra-uterine pole of which is movable and flexible. The outer pole terminates in a ball which rests against the os and cervix, and through the centre of this extends the intra-uterine stem. Both poles are thoroughly insulated, except at the cervical ball in the one and the olivary bulb in the other. The instrument being placed in position against the cervix with or without a speculum, the intra-uterine rod is pushed up to any desired point and the current established. The preferable way is to push the olivary point up to the fundus. Where there is much ovarian congestion I sometimes use a divided conductor for the positive, sending one-half through a small sponge-handle to an ovary and the other to the fundus by the intra-uterine stem, the cutaneous rheophore thus not causing much irritation. One or both ovaries can be thus treated. But if the congestion be confined principally to the ovaries, then I place a rheophore over each ovary simultaneously and divide the positive between them,—the

negative to the fundus by an insulated sound or a bougie.

ELECTRICITY AS A GALACTAGOGUE.

It is suggested by a correspondent in the *American Journal of Obstetrics* for March that a collective investigation would develop the actual value of electricity in deficient action of the mammary glands, the reports so far being contradictory. The idea is a good one, as we have had the happiest results from electricity in this direction, although one or two friends were not successful in securing equally good effects because of their want of appropriate and efficient apparatus. Static electricity has been used by the reviewer in thirty-seven cases altogether. Of these, twenty-nine patients obtained a full action permanently, six were much improved, and two others were not benefited. The last two were phthisical and anæmic. Three of the six improved had post-partum hemorrhage, and they were considerably reduced in vigor thereby. We learned that after leaving us they gradually, under the systematic employment of faradism, became restored and nursed their infants the usual time. The other three were obliged to use the bottle in addition to nursing their children.

To be efficient, static electricity must be thoroughly applied by a good machine. A little school-apparatus will not do. The application should be made at least once daily,—it were better several times each day. After the gland starts into action, massage and faradism will develop it rapidly in the majority of instances. Firm uterine condensation secured by faradism arrests notably the normal action of the breasts, and prevents leakage of blood from the womb if involution is not satisfactory. Correspondents have inquired if the heart was affected by the sparks, and we may here state that such was never the case, nor was there any difference observable in the quality or character of the milk, which, so far as we know, was always normal. The infants in our own cases uniformly thrived satisfactorily.

ELECTRO-PUNCTURE IN THE TREATMENT OF LEAD PALSY.

Dr. Lopez Alonso relates the case of a man, 36 years of age, a printer, who suffered from severe lead-poisoning. The hands and fingers were flexed, and the electrical contractility in the extensor muscles was abolished. Not being able to produce contractions with the strongest currents when the electrodes were placed on the skin, the writer bethought himself of electro-puncture, which he had already employed in the preliminary examination. By this means the muscular contractility was revived, and after a few days reactions could be obtained with electrodes placed on the integument. In about a month the wrist-drop was cured and the patient was able to resume his occupation of type-setting.—*Revista de Medicina y Cirugía Prácticas*, February 7, 1885.

ELECTRICITY IN GENERAL PRACTICE.

Dr. A. Hughes Bennett has called attention lately to the need of greater study in a scientific manner of the numerous uses to which either current may be put in therapeutics. In diseases where functional activity is diminished the stimulating power of both currents is largely indicated. The obscurity attending many classes of nervous affection, such as atrophy, anæsthesia, paralysis, sclerosis, etc., is no bar to the employment of electricity in an empirical manner, for the inhibited conduction and abnormal nutrition-changes are favorably influenced thereby, and the catalytic effect of the galvanic current particularly is valuable in influencing the trophic elements of the tissues and facilitating absorption of morbid products.

The sedative and alterative effect is also valuable in excited functional conditions for the relief of pain or spasm. The value of electricity is not simply a transient matter at the time of application, but its results are frequently permanent, hence its uses are far-reaching.

246 North Twentieth Street.

"Strange Adventures" of a Bullet.—A case of pistol-wound of the thorax has recently been recorded by Schmidt, in which the bullet penetrated one of the left pulmonary veins and then passed along it into the cavity of the left auricle, merely leaving a small erosion on the posterior wall of the vein. From the auricle the bullet must have gained access to the left ventricle, and must then have been forced into the aorta, and so down to the femoral artery, where the projectile was found, apparently accidentally, at the autopsy. The reporter declares that no other explanation of the presence of the projectile in the femoral artery can be given.—*Lancet.*

TRANSLATIONS.

Toxic Effects of Antipyrine.—The rapid decline of high temperature and the slow and gradual recovery of the same, often requiring twenty-four hours, is characteristic of the ordinary effects of antipyrine. In larger single doses it causes death through cardiac paralysis; in somewhat smaller doses it affects the nervous system in such a way as to produce irritation of the central apparatus, as shown by general tetanic muscular cramps and increase of blood-pressure, and then a paralysis with loss of reflex excitability and lowering of the blood-pressure occurs. In cases of severe diphtheritic poisoning Dr. Demme warns against the use of antipyrine, on account of the not unusual concurrence of acute myocarditis. In a case of diphtheria in a boy of four years of age, instead of a decline of the fever there was a temporary antipyrine intoxication, with irregular, fluttering heart-movements, dilated, immobile pupils, and upon moving the extremities there occurred ascending convulsive movements of the muscles of the limb.—Demme, *Fortschritte der Medicin*, 1884, Nos. 20 and 21.

Diphtheria treated with Lemon-Juice.—A boy 8½ years of age was attacked by diphtheria after several days' malaise and sore throat. The false membrane was at once painted with lemon-juice every two hours, with marked effect. Within a half to three-quarters of an hour after each application the membranes were greatly reduced in thickness and only existed as a grayish film; but they showed great persistence and rapidity in reforming again until the case began to decline on the fourth day and recovered at the end of a week. The usual nourishing and tonic regimen had also been pursued. (Report upon some cases of diphtheria observed and treated in the General Hospital in October, 1884, and March, 1885, by M. Becigneuil.)—*Gaz. Méd. de Nantes*, No. 6, April 9.

Gout of the Testicle.—At a meeting of the Société Médicale des Hôpitaux, M. Guyot reported a case of swelling of the testicle in a gouty subject, or gouty testicle. This swelling disappeared at the end of a fortnight, during the development of gouty joint-inflammations. The gouty orchitis is not mentioned usually in the text-books; he only knew of one observation, which had been mentioned by Paget. M. Millard reported a similar condition occurring in his own person, preceding an attack of gout; it was a painful gouty orchitis without epididymitis.—*La France Médicale*, No. 8.

Physiological Action of Cocaine.—Brown-Séquard, in a recent communication to the Société de Biologie, stated that in his investigation into the action of cocaine he had been able to demonstrate experimentally that this substance did not act locally in producing anæsthesia, but, on the contrary, by inhibition from a distance. M. Charpentier announced that cocaine is a powerful poison—more active than strychnine or atropine—upon infusoria and chlorophyll.—*Le Progrès Médical.*

Biliary Calculi.—Huchard uses the following combination in the treatment of gall-stones:

℞ Res. podophylli,
Ext. hyoscyami,
Saponis, āā gr. v.

Make ten pills, of which one or two may be taken daily. The addition of a small amount of rhubarb, or, if constipation require it, of aloes, makes the above a useful formula for a cholagogue cathartic. —*Revue de Thér. Méd.-Chir.*

Hæmostatic Pills.—

℞ Ext. ergotæ,
Quininæ sulphatis, āā ʒss;
Pulv. digitalis,
Ext. hyoscyami, āā gr. iij.

M. et divide in pilulas no. xx. Take from five to eight daily.—Huchard.

In this formula the ergotine and quinine produce contraction of the vessels, the digitalis controls the circulation, and the hyoscyamus allays the nervous excitement. —*Revue de Thér. Méd.-Chir.*

Iodoform Solution for Parenchymatous Injection.—

℞ Iodoformi, 1 gr.;
Benzol, 9 grs.;
Ol. vaselini, 11 grs.;
Ol. gaultheriæ, 2 drops. M.

For injections into goitre and non-caseous lymphatic glands, as advised by Mosetig.—*Revue de Thérapeutique.*

PHILADELPHIA

MEDICAL TIMES.

PHILADELPHIA, MAY 2, 1885.

EDITORIAL.

ANNUAL MEETINGS OF THE MEDICAL AND SURGICAL ASSOCIATIONS.

DURING the last week the American Medical Association held its thirty-sixth annual meeting in New Orleans, and the preceding week the American Surgical Association held its fifth annual session in Washington, D.C. There is such a wide difference between the two Associations in respect to organization, aims, and methods that they do not admit of comparison, and nothing like rivalry can be said to exist between them; yet there are points of contrast which are not altogether to the disadvantage of the smaller organization. In the first place, a mode of organization suited to the smaller society is manifestly unsuited to the larger one. The mode of voting practised at the meetings of the American Medical Association is altogether unsatisfactory and unparliamentary. Such a large proportion of the audience is made up of persons who are not entitled to vote, though many of them do vote, that it is impossible to tell whether a motion which has been submitted to the voice of the meeting is really adopted or not. Concerning the aims of the Associations, they are widely different. The smaller Association exists for purely scientific purposes, the larger mainly for professional.

The eminent services of the older organization in the medical history of this country, in uniting the profession and securing the almost universal adoption of a uniform Code of Ethics, and in elevating the standard of medical education, cannot be too highly appreciated, and must always be gratefully acknowledged. Its scientific work, however, has been hampered by defects that are patent to every one, and which might easily be remedied. We do not institute a comparison, thefore, between the scientific work of the Medical and Surgical Associations, which under the present circumstances would be unjust to the former. In a very large Association it is impossible that all should have opportunity to read papers. It is to the interest of the members that only those best qualified to do so should present communications, so that the time of the meeting should not be wasted by others. Unfortunately, under the volunteer system those who are the most anxious to read papers are not necessarily those best qualified to do so. It results, therefore, that too much responsibility is thrown upon the officers of sections in preparing the programme for the meetings. A better plan would be to send the titles of papers, accompanied by a summary of their contents, to a committee of each section for consideration at a specified time before the meeting, for approval or rejection. Fewer papers should be read, and the discussion should be opened by members appointed for the purpose, who then would come prepared to speak upon the subject presented for consideration. The membership of the sections should be permanent, each delegate selecting the section to which he wishes to devote the most of his attention. Members of sections should nominate their own officers for the succeeding year, as contemplated in Dr. Keller's amendment. It might be a suggestion worthy of consideration to have the business meetings held in the evening, when only those who are entitled to vote shall be admitted, and to have the sections meet in the morning; the addresses of the chairmen could be delivered before the various sections,—indeed, in some cases it would be an improvement to have them read by title only. There should be a standing Committee on Arrangements for each meeting, so that

the lessons of experience might be utilized. At present the same blunders and the same difficulties with registration are repeated at each meeting. The prospect of a biennial session at Washington will do much to improve the Association in many respects. The decision of the Surgical Association to hold its meetings in that city was a wise one, although it is questionable whether holding its session in such close proximity to the Medical Convention will prove advantageous to it. Its last meeting was the most successful it has ever held, and on account of the importance of the papers and discussions we have published a more extended report than usual,—a perusal of which we hope will be sufficient to spare us the necessity of making any apology for devoting so much space to the proceedings of the Congress of American Surgeons, as this Association may justly be called.

A PENNSYLVANIA TYPHOID OUTBREAK.

THE reports received from the town of Plymouth, near Wilkesbarre, in this State, which is chiefly inhabited by miners and their families, announce a remarkable endemic of bowel-disorder, decidedly typhoid in character, although apparently not typical typhoid fever. Making allowance for exaggeration, it seems evident that in this small community more than a thousand persons have been stricken with the disease, and quite a number have perished. The outbreak has been directly traced to insanitary conditions, poverty, and filth, but more particularly to the contaminated water-supply. The drinking-water is taken from wells which indirectly receive the drainage of the town, or from the river, which contains the sewage of Scranton and other places only a short distance above the town. The river being unusually low at present, the sewage has been consumed by the people in a less diluted form than usual; hence the pestilence, which in many features recalls the outbreak which occurred in Eastern Tennessee some months ago, and is not very dissimilar to the winter cholera which sometimes prevails in Chicago.

The sanitary lessons of this endemic come very opportunely in aid of those who are endeavoring to put Philadelphia in proper condition to meet a cholera-invasion, and who seek to improve permanently the water-supply. We have already pointed to the danger of the use of pumps in the densely-populated parts of the city and in crowded graveyards. The Board of Health should at once take away these distributors of dilute sewage, of which there are still quite a number remaining in the city. The *rôle* of the pump in disseminating cholera-germs has been demonstrated in previous epidemics, but it is not only during the prevalence of cholera that such water is unfit for use. The pumps must go.

The outbreak also furnishes a powerful argument against the use of river-water contaminated by the drainage of large communities along its banks. This applies to the Susquehanna, but more forcibly to the Schuylkill, and sustains the arguments of the Chief Engineer of the Water Department in favor of obtaining a better water-supply for this city.

The occurrence of an endemic so near at hand will also arouse public sentiment in favor of improved sanitary measures, and will greatly aid the city health authorities in their task of placing the city in good hygienic condition.

Finally, it is to be hoped that this disaster to Plymouth will not only bring about a reaction that will improve its own condition from a hygienic stand-point, but also will strengthen and confirm the growing sentiment in favor of the establishment of a State Board of Health vested with ample authority to perform the duties that rightly pertain to it.

LEADING ARTICLES.

NERVOUS SYMPTOMS OF ENTERIC FEVER.

I.—CLINICAL CONSIDERATIONS.

THE attention of clinicians has been for a long time directed to the functional disturbance of the nervous system in enteric fever. While, on the one hand, it is known that gross organic lesions of the nervous system are rare in this disease, nothing, on the other hand, is more variable than the form and intensity of disturbances of function. Liebermeister has described four degrees of functional disturbances of the nervous system which in the grave forms correspond with the four successive stages of the attack, and which are, in fact, nothing more than the occurrence, progress, persistence, and decline of the nervous accidents of the disease. Riberolles, in a recent monograph upon this subject,* declines to accept this arrangement, as not sufficiently comprehensive. He prefers to describe the nervous troubles in accordance with their degree of frequency, as follows:

(A) *Stupor.*—This condition, τυθος of the older writers, occupies the first place in the order of frequence among cerebral disturbances. It is, in fact, the most constant phenomenon of enteric fever, and that which gives the disease its most striking character. It is the first sign of the temporary abolition of cerebral activity. In its feeblest forms stupor appears to indicate rather repose than a suspension of the mental processes. Homolle has well described this condition in the following words: "So long as no impression from without disturbs his faculties, the patient maintains complete bodily repose, to which the repose of the mind fully corresponds. Voluntarily he executes no movement, utters no word, and, if we may judge by the impassibility of his features, is without thought or active sensation. But an appeal to his attention or a slight excitation of his senses suffices to arouse him from his torpor and to call forth acts and words indicating that to a considerable degree the integrity of his memory, his mental qualities, and the soundness of his judgment are preserved."

In the greater number of cases this reaction is imperfect. Many of the movements which the patient seeks to execute are impossible; others are made slowly, as though a certain amount of feebleness accompanied the intellectual repose. To the patient in this condition the ordinary every-day inquiries of the physician appear to be a matter of gentle astonishment. The eyes are turned slowly, the replies come slowly, but are nevertheless appropriate and reasonable. Notwithstanding this, the patient does not move; the apparent tranquillity of his face is commingled with hebetude. The somnolence grows more profound and more stubborn. It is sometimes so pronounced that the patient seems to doze between his words. At this point he begins to ramble, and his utterances are incoherent. His memory, to some degree, is at fault, and the enfeeblement of the body and the mind progresses to the point at which, for example, when he is asked to show his tongue he protrudes it with great slowness and only after having several times been requested to do so. Frequently all idea of time and of place is lost, and he no longer recognizes those in attendance upon him; he is indifferent to what is said to him, surrounding objects fail to attract his attention, and he is no longer preoccupied with his own condition.

The hebetude presently becomes absolute, and the motionless features lose the lines of expression. It is no longer possible to arouse the patient sufficiently to make reply; he contents himself with turning his eyes to the side, or with some feebly-expressed gesture. Again, he seems plunged into a semi-comatose state, the eyelids are half closed, the pupils dilated, there is complete abolition of consciousness and reasonable action. When this condition does not terminate fatally, it is for the most part of brief duration.

These different degrees of stupor follow one another, as a rule, in the same individual, developing from one into the other with the progress of the attack. Before the first manifestations of the fever there is simply inaptitude for the ordinary occupations of life, some sense of weariness upon mental effort, and even when, at the end of the attack, the fall of the temperature indicates the approach of convalescence, the patient still remains indifferent and apathetic as during the course of the disease. In fact, the mental functions are

* Dr. Emile Riberolles, Contribution à l'Étude des Phénomènes nerveux, Paris, 1884.

in many instances feebly performed for some time after the convalescence has been fully established. With reference to the frequency of stupor, Riberolles found in one hundred and fifty cases, of which thirty-six died, this symptom absent in fourteen. In one instance it showed itself on the first day, and the patient died in the course of the second week. Three times it appeared during the first week, the disease in each case resulting fatally. Louis observed somnolence in one hundred and two of one hundred and thirty-four cases; among forty-six fatal cases it showed itself four times in the first day and in five other cases in the course of the first week, whilst it only occurred at this period of the disease in two out of eighty-eight patients who recovered.

(B) *Prostration.*—Side by side with stupor, and equally frequent, is enfeeblement of the forces of the body. Whilst the intelligence and the will are yet intact, the earliest indications of disturbance of the function of the body, forerunning, indeed, the beginning of fever, is an extreme sense of weariness. This is rather a sort of lassitude, a desire for repose, than a true weakness. The degree of the prostration corresponds to the intensity of the attack and the period at which it occurs. Often, however, patients apathetic and in appearance extremely feeble are capable of momentarily displaying an amount of strength that is truly astonishing. There is rather oppression than suppression of strength, and the patient appears to preserve in fact an amount of energy of which he only at long intervals gives the slightest manifestation.

As the mental power declines the muscular power grows more feeble, and there is in the movements no longer either strength or assurance. The patient is scarcely able to stand erect, his legs bend beneath the weight of his body. This condition is extremely variable, and is to a great extent dependent upon the intensity of the attack, as well as upon individual conditions.

Whilst the degree of prostration may be measured by the facility with which the patient moves in his bed, by the briskness and precision of the various acts which he performs, it is necessary in this connection to pay heed to his intellectual state, and to the degree of disinclination to movement which is present. When the muscular feebleness reaches a high degree, the condition of the patient seems almost paralytic; but an important factor in this form of coma is to be found in the mental state. The patient lies upon his bed almost like an inert body, yielding without resistance to the laws of gravity, slipping down towards the foot of the bed.

Upon the other hand, it sometimes occurs that during the greater part or even the whole of the sickness the forces of the body undergo but little diminution, and it is only upon the occurrence of some complication that the grave nature of the malady is discovered. It is to this group of cases that the term *Walking Typhoid* has been applied. Among sixty-two patients observed by Murchison, seven were obliged to betake themselves to bed upon the first day, twenty-one only after the first week, six in the third week. It is extremely difficult, however, to designate with precision upon what day of the sickness the patient goes to bed or enters the hospital. Riberolles insists upon the fact that this difficulty is equally great in military as in civil practice. So soon as the affection is recognized, or even suspected, the patient is sent to the hospital. On the other hand, many cases present at the outset the symptoms of some simple gastric disturbance, or a bilious attack, and it is only after the course of some days that fever and debility suggest the true nature of the case.

The palsies which occur in the course of enteric fever must be looked upon rather as complications than as nervous symptoms properly so called. They are very rare during the course of the fever. The most common form is hemiplegia, which is not infrequently associated with hemianæsthesia.

(C) *Delirium.*—Like stupor and debility, delirium is a phenomenon rarely absent during the course of enteric fever. Like them, it presents the greatest range of variation, both as regards duration and intensity. In most of the cases in which it is present, it is a transitory phenomenon of short duration and in general moderate. Of Riberolles's one hundred and fifty cases, twenty-two only were without delirium throughout the attack. Murchison also noted the complete absence of intellectual disturbances in some of his cases. And of Louis's one hundred and thirty-four cases, thirty-two presented neither somnolence nor delirium. As Louis pointed

out, delirium usually follows somnolence; it is rarely observed in the early days of the attack, appearing in most cases not before the sixth or seventh day. According to Homolle, at first, and in certain subjects throughout, delirium comes on towards evening, at the time when the tranquil somnolence of the day gives place to restlessness. It is sometimes preceded by impatience, a sense of annoyance, flushing of the face, increased headache, and dilated pupils. It is still more frequently ushered in by disturbed sleep, by fatiguing dreams, and by a sense of weariness on waking, so extreme that the patients fight off sleep for fear of it.

Pronounced delirium rarely begins abruptly. The patient, between sleeping and waking, utters meaningless expressions, words without order, but when fully awake appears to be lucid. In children there are cries during sleep, often cries of fright accompanied with trembling. Again, a child, though roused, apparently dreams on, much agitated and in terror. This form of delirium is associated with hallucinations of sight and hearing. The child replies to imaginary appeals, or speaks to persons whom he seems to see in clouds or in some picture.

Not infrequently, delirium is continuous, with exacerbations at nightfall. Here we distinguish two forms. A calm or passive delirium, in which the patient talks continually, uttering disconnected words accompanied by ceaseless and equally disconnected movements; he seeks to rise from his bed, to go out, opposing to the attendants a quiet but determined resistance; or else he is violent and angrily opposes those who seek to detain him. He may then become dangerous to himself or to others. Many are the instances in which patients in this form of delirium have eluded the vigilance of their attendants and thrown themselves from the window.

Sometimes the excitement is so great that the patients are controlled only by force. Their struggles are energetic, even violent, and their outcries furious. This condition may be prolonged several days, or even until the fatal termination.

Roger mentions the case of a child whose cries were so prolonged and violent that the passers-by collected in a crowd under the windows of the house. Violent delirium of this kind occurs only in grave cases, usually only at intervals between periods of quiet. Towards the close of the illness, when the fatal issue is at hand, it alternates with profound debility and semi-coma.

Delirium occurs at a variable period in the course of the sickness. Sometimes it is among the earliest symptoms. Riberolles saw four cases delirious at the time of admission at the hospital; Louis, two who were delirious the first night of their sickness. Bristowe observed maniacal delirium on the second day. Murchison reported a case who on the fifth day had such a delirium that he was thought to be insane. Mottet mentions the case of an enteric fever patient who was placed in an asylum before the nature of his sickness was discovered. Hannot and Bucquoy have observed, at the beginning of enteric fever, delirium accompanied by ideas of grandeur or profound melancholy. A patient of Chomel demanded without cessation that he might be bled. A patient of Trousseau refused all nourishment and insisted upon being fed with an œsophageal tube. In military hospitals it is not uncommon for the patients to demand their discharge, insisting upon it that they are not sick.

That form of delirium well described by Trousseau and Becquerel as occurring upon the decline of the fever or during convalescence, and called by French writers the delirium of inanition, cannot, as it occurs in many other conditions, be properly described in this connection.

(D) *Vertigo.*—This distressing phenomenon sometimes occurs at the beginning of the sickness, and has much to do with the general malaise which the patient experiences. It is frequently associated with the disturbances of sight and hearing which are so common at the beginning of the fever, as phosphenes and tinnitus aurium.

(E) *Disturbances of Motility.*—Muscular disorders are sometimes the result of a profound disturbance of cerebral innervation, sometimes they are of spinal origin. The most frequent form is *tremor*, which shows itself for the most part at that period in the course of the disease when disorders of the nervous system, and especially when delirium, becomes most marked. Trembling affects especially the lips, the face, and the upper extremity. *Subsultus tendinum*, which may be perceived by the touch when it is not visible, occurs in the greater number of cases of severe type.

Carphology is equally frequent in grave cases. The patient seeks to seize with his hand objects suspended or floating in the air, or restlessly grasps and fumbles at imaginary objects in the bedclothing, his countenance usually being impassive and without expression.

Partial contractures are sometimes observed. *Spastic distortions* of the neck and trunk have also been recorded. *Cataleptiform rigidity* was observed by Barth and Murchison, but invariably in women. Riberolles saw in the same individual strabismus and contracture of the upper extremity.

Epileptiform convulsions have been occasionally noted. Chomel observed in five cases general convulsions which were rapidly followed by death. Murchison observed in two thousand six hundred and ninety cases of enteric fever in the London Fever Hospital, general convulsions in six instances, in one of which they were ascribed to uræmia. In most cases convulsions have occurred in infants, and they have preceded a usually fatal issue by only a few hours.

It is merely necessary to allude to the *fibrillary contractions* which are observed in the muscles upon light percussion or pinching.

(F) *Disturbances of Sensation.*—Certain of the disturbances of sensation, such as muscular pains and visceral neuralgias, produced by direct changes in the organs, are by no means peculiar to enteric fever. Others are the direct outcome of the disturbances of nutrition in the nervous system peculiar to this disease. Chief among these are cephalalgia, hyperæsthesia, anæsthesia, and disturbances of the special senses.

1. *Head pain* is among the earliest manifestations, often preceding by several days the rise in temperature, and rarely altogether absent. Of one hundred and thirty-four patients studied by Louis, in six only was headache absent. Riberolles found it wanting in the beginning in ten only of one hundred and fifty cases which he analyzed, and of these ten, eight suffered headache within five days of the commencement of the attack. In the other two, intense backache (rachialgia) began during the period of incubation and continued throughout the attack. Headache almost invariably augments in intensity as the temperature rises. Not infrequently it temporarily disappears after free epistaxis. It is generally dull, sometimes frontal, sometimes diffuse, less frequently occipital. It is much intensified in meningeal complications.

Occasionally, headache is paroxysmal, with complete intermission. Rosenbach has noted true neuralgia, corresponding to the distribution of particular nerve-trunks and accompanied by hyperæsthesia.

2. *Hyperæsthesia.*—This symptom is sometimes intense, especially in the spinal region and in the articulations of the extremities. Deep hyperæsthesia of the muscular masses of the limbs is occasionally encountered, and is probably dependent upon serious alterations of nutrition. Cutaneous hyperæsthesia is rare, being observed chiefly in women and children. Murchison has called attention to the fact that the cutaneous hyperæsthesia of enteric fever tends to assume the paraplegic distribution, being most marked in the legs and lower part of the trunk.

3. *Anæsthesia.*—This phenomenon is frequent and of varying degree. It is dependent to a great extent upon the condition of the central nervous system, and in fact corresponds to the degree of stupor. Anæsthesia of the mucous tracts is one of the causes of involuntary evacuation on the one hand, of retention of urine on the other.

Considerable difference of opinion obtains with reference to the *tendon-reflexes*. According to Ballet and Strumpell, these reflexes are exaggerated. Pluyand also found them exaggerated in fifty-eight cases of one hundred in which they were studied. Pettit-Clerc found them diminished.

4. *Disturbances of Special Sense.*—As we have just pointed out, tactile sensations are sometimes diminished, often wholly abolished, and the cerebral disorders to which this change must be attributed will in most instances account also for the derangements of the other organs of sense.

The pupils are dilated, and in many instances there is intolerance of light, amounting occasionally to photophobia, with difficulty in distinguishing near objects. When stupor is profound the patient appears to see nothing, or rather to be profoundly insensible to visual impressions transmitted to his brain. When delirium is violent the conjunctiva is often deeply injected, and retinal congestion has been observed without retinitis.

The pupil is sometimes dilated, some-

times contracted. Murchison observed dilatation of the pupil in seventy-five per cent. of his cases. When the loss of consciousness is complete, the pupil is usually contracted.

Disturbances of the sense of hearing are not less common than those of sight. In addition to the subjective sensations of hearing which attend the beginning of the sickness in almost all cases, every degree of deafness is met with later in the course of the attack. Absolute loss of hearing is, however, rare, and, in the absence of inflammatory complications, it is unaccompanied by pain.

Certain other symptoms must be referred to disturbances of innervation, but they are for the most part directly dependent upon changes in the vaso-motor or trophic system. They include among others certain alterations of secretion, erythema, and gangrene from pressure. Finally, all the disorders of the nervous system peculiar to enteric fever are to be referred to cerebral depression or excitation, for the medulla, the cord, and the vaso-motor system appear to be only secondarily implicated. J. C. WILSON.

(To be continued.)

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE latest new thing in medicine here is a "Year-Book of Treatment." At last it seems to be recognized that a patient does not send for a physician merely because it is customary for persons when ill to call in a medical man, nor yet, like Borthorp Trumbull in "Middlemarch," to have scientific observations made of his condition, but because he believes that the medical man, when called in, will be able to help him struggle with his malady. It used to be customary to speak of "calling in medical aid;" but that was in the days when the lancet flourished, when painful forms of counter-irritation were in vogue,—when indeed the patient got something tangible (literally as well as metaphorically) for his money. But when the expectant treatment came and the doctor looked calmly on at the struggle, ready to act if action became desirable, the expression "medical aid" died out as being to a great extent a misnomer. Now a wave of reaction seems setting in, and medical men realize that, after all, the patient does hope for some good from his medical attendant in return for his outlay.

(A patient amused me very much yesterday. She had been for some time getting weaker and thinner, with her liver out of order, while her medical man had been feeding her upon meat and giving her vegetable tonics and iron, but without good result. At last she suspected that the treatment did not suit her, and so consulted me. When asked to put out her tongue, she observed, "The other doctor never asked to look at my tongue." If he had, he might have been more successful with his treatment. "Has he been giving you steel?" I asked. "Yes, and it does not agree with my liver," she promptly added, evincing a shrewdness that took me aback. On vegetable tonics without iron, and much lighter food, she got on famously. Yesterday she called to report her improvement. Amidst her conversation she added, "And I shall have to pay him a large bill for making me worse." That is scarcely medical aid: it is rather "medical injury!")

As a consequence of this new wave of opinion, Messrs. Cassell & Co. have issued a novel book, with a large number of contributors. Dr. Mitchell Bruce presides over the section devoted to Diseases of the Heart and the Circulation; Dr. Lauder Brunton over that dealing with the Lungs and Respiratory Organs; Henry Tower over that of Diseases of the Eye; George P. Field over that of Diseases of the Ear; Malcolm Morris over Diseases of the Skin; and so on. A very interesting section is that dealing with the Acute Infectious Diseases, contributed by the late lamented Dr. Mahomed, who was anything but a "do-nothing" doctor. He commences by dealing with "The Antipyretic Treatment," and makes the subject clear and instructive. First he speaks of the abstraction of heat by the cold bath and allied measures; then of the reduction of the temperature by the administration of remedies internally, and thinks highly of the future of *antipyrine*. Then he discusses the antiseptic treatment as applying to enteric fever. He concludes by brief remarks upon the treatment of acute pyrexial states as seen in infectious fevers. The whole section seems to me worthy of careful study and reflective thought. The principle inculcated is to follow the rational indications furnished by the patient's condition. In the section on the Diseases of the Nervous System the contributor has taken another line. He has given abstracts of different articles which have appeared during the past year, in some instances appending some observation of his own.

Of the value of the book to a man fairly well read and experienced, who has not much time for fishing the seas of medical literature for himself, there seems to be no question. The various manuals issued by the firm, under the superintendence of Mr. Malcolm Morris, are commanding a good position in the market as well as in professional opinion. The older books which for long have domi-

nated the profession are rapidly giving way to younger and more advanced competitors, as it seldom happens that the man who edits the later editions at all approaches the man who originally wrote the book, Broadbent's edition of Tanner's Practice of Physic being a brilliant instance to the contrary. New books are certainly coming out here, but in sparse quantity compared to the legion springing up on your side of the water, many of which find their way over here and are in repute. Not only are the products of the United States in drugs and chemicals taking the lead of home productions, but in literature they are threatening the old supremacy of England, or rather the United Kingdom, for Edinburgh always has held a good position in medicine, and when a Dublin man does gird up his loins for a book it is usually a good one.

The utility of such a book as the one spoken of above seems to me to depend very much on the reader. If he be well grounded in therapeutics he can judge of the value of what is written ; but if not well grounded, or even that but not well abreast of the times, he will be carried away by what he reads, not being able to weigh it in the balance. And this side-issue raises the question of how far does the present scheme of medical education make the most of the time which is at the medical student's disposal, it being a well-recognized fact that, in this country at least, the medical student has far from unlimited means; and this matter carries with it the question of being able to afford the time requisite for a fairly complete knowledge of medicine. In the old days, when there were few subjects to study, anatomy naturally took a prominent position. Muscles, nerves, arteries, and bones always had been and always would be, and if a man knew them all properly no doubt it was a good thing. While dissecting he was devoting some time to other collateral matter, and so there was not any particular waste of time. But things are now profoundly altered, and a man has to work pretty steadily during his four years to get up the subjects required by the examiners. He must be well grounded in anatomy, and must know how to perform major operations which he will never perform. They are very unlikely to come before him, and in these days of railways and telegraphs, when such a grave case does crop up, some man of repute will be called in to perform it. In the old days a man was thrown upon his own resources far more, speaking broadly, than at the present day, and to be able to talk of having performed such and such an operation was of signal service to a man in society and in spreading his reputation. Now, no doubt it would be well for every medical man in the country to be able to cut for the stone, but how many will ever attempt the operation ? It may be necessary to teach every man how to operate for hernia, to tie an artery, or amputate a limb, etc., in order to meet emergencies, but a great many operations he sees performed at the hospital are matters with which he will never be personally concerned. It is on the side of anatomy, and to a less extent surgery, that economy must be practised, if some change has to be made. Surely, too, a great deal of time is spent on materia medica with disproportionate results. A medical man now deals with a reputable druggist, and buys not raw materials, but preparations, many of them very elegant. Why should time be spent over acquiring knowledge which scarcely can ever come into play, when so much that is highly desirable is not even attempted ? To my mind, being neither engaged in medical teaching nor examining, it would be far better to cut off much of materia medica from one end of the lectures on therapeutics and develop the other end into some lectures on foods and feeding, or the modifications of function in the assimilative organs wrought both by disease in them and by general maladies like pneumonia or enteric fever. It is all very well to tell a man to put the patient upon slops and fluid food. But what are slops ?

Some little time ago I was with two general practitioners, no bad specimens of their class, —one indeed decidedly a strong man, specially in a surgical direction,—when this question cropped up. Both got to beef-tea and milk and seltzer-water, and then the well of inspiration dried up. Nor were they behind others of whom similar interrogatories have been made. It may be all very well to say that my experience has been unfortunate; possibly it may have been ; but at least it has been extensive, all must admit. As physician to a hospital of repute in the shape of the resident medical officer, favorable specimens of the latest teaching come under my notice, and it must be said that on this topic there remains to be taught much that would be useful alike to the young practitioner and his patients. The student may be taught the distinction between senega and serpentaria, calumba and rhubarb, cascarilla and cinchona, Epsom salts and sulphate of zinc or oxalic acid, and forget all about the distinctions shortly after the last examination has been *un fait accompli.* But who tells him to remember that the saliva is apt to be limited in acute pyrexia, and therefore the farinaceous elements of food must be given in a readily assimilable form if they are to be of any use to the patient ? Arrowroot was in great vogue thirty years ago, and is certainly a very soluble form of raw starch : and, after all, solubility is the essence of digestion.

The physiologist cannot well enter into these matters of clinical medicine. The lecturer on Practice of Physic feels that he cannot include these matters in his course, already inconveniently large. Who, then, should teach the

youthful mind these details, of such transcendent importance in acute disease when life is trembling in the balance and the question of supporting the patient has become imminent? Suppose the family decide to nurse the sick man: if the doctor cannot give directions as to the food and dietary, what follows? The patient gets such things as the knowledge of the family can suggest, and the feeding of the sick person is a question of such scraps of information as the family and its intimate friends may be able to muster. Suppose the patient loathes milk, how has that strength to be maintained upon which the issues will turn? The medical man has been carefully taught the use of drugs, and the medical—or rather the medicinal—management of the case is excellent; but that alone will not save the patient, any more than a ladder could consist of one side-pole. Who is to teach the other half of the knowledge requisite to give efficient succor to a man stricken down by acute disease? Certainly Sidney Ringer recognizes the necessity for some knowledge of foods suitable for the sick, and gives the ways of their preparation; but in what examination is a question on this matter ever asked? and without that the student will not get the subject up. He has enough to get up, he feels, without voluntarily and spontaneously adding to his load. Then when the examination is over he does not turn his attention to the neglected subject. Probably he does not make the discovery that some knowledge of food and feeding is desirable until by some accident the subject is forced upon his attention. Yet he is far from indifferent about the subject when it has once been borne in upon him, as the readiness with which he seizes upon anything that will help him when he has once awakened up to the importance of the matter testifies. This is a matter which will come before the practitioner from the moment he gets his first patient, yet no preparation is made for it. He never dreams of buying barks and roots in the natural state of the raw material, yet he is compelled to know them. How he has to direct the dietetic management of sick persons (and still more in pyrexial states) is never pointed out to him, yet surely such knowledge would be very useful to him—and to his patient.

Some time ago, in conversation with the manageress of one of the many Homes now springing up where paying patients can be nursed, the subject of feeding sick persons cropped up, and she was very enthusiastic about "a twenty-minutes' pudding," but of what it consisted did not transpire. A tentative remark about the digestion of the starchy materials of our food flew past her unheeded. It was soon clear that of any rational ideas of digestion, theoretically or practically, she was in unillumined ignorance: all she knew was a little empirical knowledge, and of that she did not possess a superabundance. Who, then, is to know this matter of feeding? Who is to tell the student of the difference betwixt raw or uncooked starch and cooked starch?—that in the latter the insoluble starch-granule is not only cracked, but the starch is largely converted into soluble dextrin by exposure to heat? that by the addition of some such soluble carbo-hydrate to meat-broths they endow these broths with a decided food-value? and that the meat-broth itself is but an agreeable vehicle for some food? Yet this is what he ought to be instructed in, if he is to be fitted to meet disease. When the patient sinks of exhaustion, of what does he die? His stores of force are run out; but what is the material which constitutes the body-force? I should read with delight a lecture upon this topic by Dr. Austin Flint or Dr. Da Costa,—or perhaps some less illustrious physician will grapple with the topic. We know that when a patient declines all food he will die in a given number of days. If a healthy person be hungered, as by shipwreck, he also will live a given number of days. In the latter case death will come all the sooner if the surrounding temperature be low. In the former case the duration of life will be shorter as the body-temperature rises. There is a question of combustion involved. It may not be the whole question, but it is an important factor! Alcohol is a readily-combustible hydro-carbon: it is used freely in critical times. Does not the idea naturally suggest itself that somehow the store of glycogen—the body-fuel—is a cardinal matter? If this be so, it is evidently desirable to keep up the stock of this material so that it may not be exhausted. If raw or uncooked starch be employed, probably it is little acted upon by the diastase of the saliva, or even the diastase of the pancreas, both organs being crippled by the general malaise. But a starch which has been rendered soluble by previous baking or by the matting process has been so modified that it is highly soluble.

I do not know how the matter stands in the United States, but as regards the mother-country, little, very little use indeed is made of those prepared foods spoken of—sometimes derisively—as "Baby-Foods," either in cases of primary dyspepsia or in that debility of the digestive organs which is involved in serious morbid conditions. Yet by the addition of cooked starch, as biscuit-powder, to meat-broth, and of malt preparations to milk or milk somewhat diluted with water, foods nutritive and at the same time readily assimilable are furnished to the sick person. Of the advantage of a fairly competent knowledge of such foods, both in their chemical elements on the one hand and in their variety on the other, probably no one can be better aware than myself: and such knowledge has been of infinite service to me, or some grave delusion exists in my mind. We must, too, remember another aspect of the subject,—viz., variety. While

we are in health we are apt to growl about lack of variety in our food: how much more, then, the sick man! If the changes can be rung by different forms of meat-broths combined variously with different prepared foods, how much variety can be furnished to sick persons, and with that how much inducement to take that nourishment, so badly wanted and so hard to supply in many instances! Sago, tapioca, and rice or barley can all be placed in a slow oven and baked for an hour without scorching, and so be prepared for use in the sick-room. When the patient is convalescing, a milk pudding can be prepared of such material, which requires but little of the digestive act. Or there are various forms of plain biscuits which are admirably adapted for use with broths or soups (the Channel Islanders always thicken their soups with biscuit broken fine or powdered). By such means a good and, indeed, substantial meal can be furnished to a phthisical person with softening tubercle and a feverish temperature,—a typical instance of enfeebled digestion due to general malaise. And as for gastric catarrh or atonic dyspepsia, such a meal would not be likely either to become enfolded in a layer of mucus or to present any difficulty as to solubility. These may seem very simple matters, scarcely worth putting on paper; but the professional acquaintance with them is not as ample as it might be with advantage to invalids and sick persons. When a medical man lifts his eyebrows or protrudes his lip when "Baby-Foods" are mentioned in relation to dyspeptics and persons acutely sick, the impression he makes on my mind is this: that he has not made a study of the matter of food and its digestion, and that he has yet to learn some matters which, when acquired, will enlarge his usefulness and strengthen his hands when he stands by the bedside of his patient.

J. Milner Fothergill.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN SURGICAL ASSOCIATION.

THE Fifth Annual Meeting of the American Surgical Association was held in the city of Washington, D.C., April 21 to 24, inclusive, the reading-room of the Army Medical Museum being occupied during the session. The following Fellows were in attendance upon the session: J. M. Barton, Philadelphia; John S. Billings, U.S.A., Washington; R. B. Bontecou, Troy; William T. Briggs, Nashville; J. H. Brinton, Philadelphia; P. S. Conner, Cincinnati; N. P. Dandridge, Cincinnati; J. W. S. Gouley, New York; S. W. Gross, Philadelphia; Moses Gunn, Chicago; J. C. Hutchison, Brooklyn; Christopher Johnston, Baltimore; Solon Marks, Milwaukee; Hunter McGuire, Richmond; J. Ewing Mears, Philadelphia; E. M. Moore, Rochester; C. B. Nancrede, Philadelphia; C. T. Parkes, Chicago; W. F. Peck, Davenport; T. F. Prewitt, St. Louis; D. Prince, Jacksonville, Illinois; J. B. Roberts, Philadelphia; N. Senn, Milwaukee; L. McLane Tiffany, Baltimore; J. C. Warren, Boston; B. A. Watson, Jersey City; and J. R. Weist, Richmond, Indiana.

The social features of the session were studiously kept from intruding upon the scientific proceedings. The annual dinner was given at Wormley's Hotel on the day before adjournment. A pleasant surprise was arranged for the Association on the afternoon of the 22d, by Dr. Billings, who invited the Fellows to visit Baltimore and inspect the Johns Hopkins University and Laboratories. On this occasion Dr. Tiffany, one of the Fellows residing in Baltimore, entertained. The Association at lunch.

First Day's Session.—The meeting was called to order by the President, Dr. W. T. Briggs, of Nashville, Tennessee. The President then delivered the

ANNUAL ADDRESS.

After thanking the Association for the honor conferred upon him in choosing him to preside at this meeting, he spoke of the usefulness of these annual sessions, where the reports of work done by the Fellows during the year are brought as contributions to the advancement of surgical science. Referring to the late Prof. Gross as one "who stood, like Saul, a head and shoulders taller than his brethren," he declared that his absence had deprived the Fellows of the Association of the light of remarkable genius and learning which had heretofore contributed so much of value to the discussions, and bowed their heads in sorrow for the loss of one whom they had come to venerate as the Nestor of American Surgery. At the last meeting, held one year ago, he lay prostrated by sickness, and soon after his spirit passed away. "To-day we realize that he whose fertile brain conceived and whose indomitable exertions brought the Association into existence and developed it to its present proud position among the scientific bodies of the country, has gone from among us forever. The death of Prof. Samuel David Gross orphaned the surgical profession of America, and removed from its ranks one who, as pathologist, surgeon, and medical philosopher, was the acknowledged peer of any in the world. He no longer lives in the flesh, but his labors in the domain of science for a period of nearly sixty years have secured for him an immortality of fame, and his utterances and achievements will descend to future generations of the profession as a precious heritage. It may be truly said of him, not only that he was the greatest of American surgeons,—for that proud eminence is conceded by all,—but that he was a truly

great man. The deference and honor paid to him the world over, and the specific distinction he bore as the gift of the two most ancient and renowned institutions of learning teaching in the English tongue, attest the exalted reputation as a scholar and scientist he had won. But he had titles to greatness other than these, and in a broad and philosophic sense superior to them. Though endowed with brilliant intellectual qualities, his life and example are truly great in that he conspicuously illustrated the value and dignity of enthusiastic labor and devotion to his profession. His publications—not one of them inferior, and some of them unequalled—constitute a pyramid of industry. He was great in displaying the possibilities of perseverance and untiring toil animated by lofty aims, and he stands forth an exemplar and majestic model on which aspiring youth may fashion itself to the noblest form of achievement. Before his day, Physick in the East and Dudley in the West had shone resplendent and without rivalry. He came to fill, and did fill,—in the professor's chair and at the operating-table,—the respective theatres of both of these justly eminent men. Both East and West—New York and Philadelphia, as well as Louisville and Cincinnati—are proud to claim that they were the seats from which he sprung and the spheres in which he taught.

"In the fulness of his stature it may be said of Gross that 'he whose fame filled the world stood, like the statue of a demi-god, poised on the apex of his monumental shaft, far above surrounding things, pointing to an earlier day-star than greets the vision of ordinary mortals.' He was indeed the Father of this Association. He has left it to us, his fellows and successors, to nurture and maintain in all the vigor and power with which he would have himself invested it, devoting ourselves to the duty of making it as great and brilliant as the fame of its Founder, and as enduring as the science to which he consecrated his life."

The remainder of the address was devoted especially to a consideration of some of the means by which the usefulness and influence of the American Surgical Association could be best promoted. The speaker advised the extension of the membership so that it would be in a higher sense representative of American Surgery, so that all talented, industrious, and aspiring surgeons could be admitted to fellowship, in order that it might escape the criticism of being a close corporation. He further held that the President's address should be scientific in character, on some subject connected with surgery, so as to constitute it a real contribution to literature. He deprecated anything like a degeneration of the meeting into a mere social and convivial gathering. The suggestion was made that the date of the meeting might be postponed to a later period in the year, so that during the summer a larger attendance of Fellows could be obtained. Delay in the appearance of the Transactions could be prevented if the papers were handed in at the time of reading already prepared for publication. The Constitution having a provision for Honorary Fellows, and none having been named, he called the attention of the Nominating Committee to this fact, and suggested that such alliances would react beneficially to the Association. In conclusion, he congratulated the Fellows upon the success of the Association and the value of its proceedings, and concluded with the statement that much of the success of the meetings had been due to the personal exertions of the able and accomplished Secretary of the Association, who had so faithfully performed his task. The meeting was then declared open for the business of the session.

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EXECUTIVE SESSION.

At the close of the address of the President an executive business meeting was held, at which routine business was transacted. The report of the Treasurer was referred to an auditing committee, and a committee on nominations of officers for the ensuing year was appointed, as follows:

C. T. Parkes, of Chicago, Illinois; B. A. Watson, of Jersey City, New Jersey; E. M. Moore, of Rochester, New York; W. F. Peck, of Davenport, Iowa; N. Senn, of Milwaukee, Wisconsin; S. W. Gross, of Philadelphia, Pennsylvania; N. P. Dandridge, of Cincinnati, Ohio.

The Secretary, Dr. J. R. Weist, read the minutes of the preceding meeting, which were approved.

The business having been transacted, Dr. David Prince read a short paper, in which he described an original device for purifying the atmosphere, which he deemed of the greatest value in the operating amphitheatre. He referred to the almost universal presence of micro-organisms in the air, and described the various forms of schizomycetes, both innocent and pathogenetic, showing the prevalence of the latter more particularly in houses and hospitals. His device consisted in submitting the air, before it entered the room, to an artificial shower of water impregnated with carbolic acid,—the idea being based upon the well-known power of rain to purify the atmosphere. A diagram of such an operating-room was presented.

In the afternoon, at two o'clock, Dr. John B. Roberts, of Philadelphia, read a paper on

THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE HUMAN BRAIN.

This comprehensive essay contained a number of illustrative clinical records, and concluded with some elaborate tables interpreting the locality of the lesions of the brain by symptoms in cases of head-injury, and neoplasms, in the light of recent theories of the

localization of motor and sensory cortical centres. He advanced the following views:

I. The complexus of symptoms called "compression of the brain" is not due so much to displacing pressure exerted on the brain-substance as it is to some form or degree of intracranial inflammation.

II. The conversion of a closed (simple) fracture of the cranium into an open (compound) fracture by incision of the scalp is, with the improved methods of treating wounds, attended with very little increased risk to life.

III. The removal of portions of the cranium by the trephine or other cutting instruments is, if properly done, attended with but little more risk to life than amputation of a finger through the metacarpal bone.

IV. In the majority of cranial fractures the inner table is more extensively shattered and splintered than the outer table.

V. Perforation of the cranium is to be adopted as an exploratory measure almost as often as it is demanded for therapeutic reasons.

VI. Drainage is more essential in wounds of the brain than in wounds of other structures.

VII. Many regions of the cerebral hemispheres of man may be incised and excised with comparative impunity.

VIII. Accidental or operative injuries to the cerebral membranes, meningeal arteries, or venous sinuses should be treated as are similar lesions of similar structures in other localities.

IX. The results of the study of cerebral localization are more necessary to the conscientious surgeon than to the neurologist.

The principles of treatment were, for the sake of exciting discussion, dogmatically formulated as follows:

The principles of the operative surgery of the brain are applied to the treatment of

A. Cranial Fractures.

(*a*) In closed (simple) fissured fractures.

1. No evident depression, no brain-symptoms. No operation.

2. No evident depression, with brain-symptoms. Incise scalp and trephine.

3. With evident depression, no brain-symptoms. Incise scalp and possibly trephine.*

4. With evident depression, with brain-symptoms. Incise scalp and trephine.

(*b*) In closed (simple) comminuted fractures.

5. No evident depression, no brain-symptoms. Incise scalp and probably trephine.†

6. No evident depression, with brain-symptoms. Incise scalp and trephine.

7. With evident depression, no brain-symptoms. Incise scalp and trephine.

8. With evident depression, with brain-symptoms. Incise scalp and trephine.

(*c*) In open (compound) fissured fractures.

9. No evident depression, no brain-symptoms. No operation, but treat wound.

10. No evident depression, with brain-symptoms. Trephine.

11. With evident depression, no brain-symptoms. Possibly trephine.*

12. With evident depression, with brain-symptoms. Trephine.

(*d*) In open (compound) comminuted fractures.

13. No evident depression, no brain-symptoms. Probably trephine.†

14. No evident depression, with brain-symptoms. Trephine.

15. With evident depression, no brain-symptoms. Trephine.

16. With evident depression, with brain-symptoms. Trephine.

(*e*) In punctured and gunshot wounds.

17. In all cases and under all circumstances. Trephine.

B. Intracranial Hemorrhage.

Trephine for the removal of clot and arrest of bleeding when the probable seat of hemorrhage is ascertainable, and the clot is believed to be a localized one.

C. Intracranial Suppuration.

Trephine and make, if necessary, exploratory punctures in all cases of abscess.

D. Epilepsy following Cranial Injury.

Remove portion of cranium in selected cases.

E. Insanity following Cranial Injury.

Remove portion of cranium in selected cases.

F. Cerebral Tumor.

If can localize it, and if it is probably superficial, remove bone; and excise growth if it is found.

The discussion was opened by Dr. Hunter McGuire, who said, although agreeing with much that he had heard, he was obliged to differ in points of practice. The indications when to operate given by the speaker are very extended, but upon reviewing his conclusions there appear to be only two conditions in which we are not to operate, and these are identical. This practice of trephining under all circumstances, if adopted, would carry surgery back about one hundred years. This he regarded as dangerous teaching to send out from this Association, especially for young men to follow. The fact is that no safe rules can possibly be laid down for the surgeon for this operation, because no two cases are exactly alike in their features, and the condition in the case under consideration will indicate the principles which must govern operative surgery in the case.

The statement is made that symptoms of compression are not due to compression of the brain, but to inflammation. How, then, he asked, would the lecturer account for the appearance of brain-disorder immediately

* In classes 3 and 11 I should be inclined to trephine if the depression was marked, or if the fissures were sufficiently multiple to approach the character of a comminuted fracture.

† In classes 5 and 13 I should trephine, unless the comminution was found to be inconsiderable.

after the infliction of an injury to the cranium with depression of the fragments? It seems impossible that inflammation could be produced in so short a period.

The statement has also been made that "trephining the skull is of little more danger, considered as an operation, than the removal of a finger through the metacarpal bone." It was Cooper, he believed, who had said that "between the trephine of the surgeon and eternity for the patient there intervened only the thickness of a piece of paper."

As regards the importance of securing good drainage, he heartily agreed with the reader of the paper. In the case with splintering of the inner table, where the brain is likely to be injured by the spicula of bone, the necessity of trephining is evident. He showed a button of bone removed by the trephine presenting such spicula on the inner surface. This was from a case of punctured fracture of the skull with an insignificant external wound. Finding symptoms of brain-irritation, he removed this portion of bone and found the membrane beneath bulging and tense, and when he incised the membrane the cerebro-spinal fluid spurted out, showing the increased tension. The patient at once improved, but it is too soon to announce the final result.

The operation has been mentioned in the treatment of insanity. He had one case illustrating this. The man was a negro, whom he found in the Asylum of the Freedmen's Bureau at Richmond. He had been in the institution for a year, during which period he sat crouched in a corner, for the most part, and had not uttered a single word. Upon carefully examining his head after shaving the scalp, Dr. McGuire found the scar of an old injury to the skull, with slight depression. He trephined him and removed a button of bone, showing an exostosis upon its under surface which had been embedded in the convolutions. At the doctor's visit the next morning he said "good-morning" to the patient, who answered, "Good-morning,"—the first words he had uttered since coming into the institution. He then said, "Where is the army to-day?" and the doctor inquired, "Where was it yesterday?" He said, "At Manassas." The army had been at Manassas nine years before! The intervening time had been to him a blank. He afterwards gave an account of his injury. He could recall events up to the time that he was struck upon the head with a boat-hook by a companion. He could remember the blow upon his head, but nothing more. The interval was an entire blank. The operation restored him both consciousness and speech.

Dr. Gunn said that his views upon this operation are on record, and he need not repeat what he had said in the paper read three years ago, in which he had advocated a more frequent use of the trephine. He was still of the opinion that in cases of fracture with depression, the fracture being a simple one, the rule should be to elevate the bone, as the rule had always been in compound fractures. The advances made in antiseptic surgery give us here a great advantage, and enable us to convert a simple into a compound fracture by incising the tissues over the bone, without increasing the danger to the patient. He was glad to see that these views had been approved by the President of the Society in a paper read two years later.

He agreed with the author of the paper that the operation of trephining is not one fraught with danger, that it is a simple operation, and, indeed, a comparatively large portion of the cranial wall can be removed without special danger when done by a competent surgeon, often with positive benefit.

With reference to the first proposition, that the symptoms of compression of the brain are not due to pressure, he agreed with the lecturer in the vast majority of cases. Mere compression of the brain is not a very important condition; the hemispheres can easily accommodate themselves to pressure. The danger is in the irritation which is set up, the inflammation, and the changes in nutrition which must follow. The irritation is not only from the spicules of bone thrust inward at the time of the accident, but from osteophytes which subsequently spring up in the course of repair, like the callus of broken bone elsewhere. He could not, however, go as far as the lecturer did in saying that there is no such thing as compression of the brain. With the exception of these, he agreed with the lecturer in every point. His views are in accord with good sound judgment.

Dr. Nancrede would also take exception to two of the propositions. In the first one named, if the reader of the paper would insert the word "secondary," so as to make it read that "all secondary symptoms of brain-compression after depressed fracture are due to inflammation," he would agree with him. The observations of Fischer upon the effects of injuries of peripheral nerves upon the brain in connection with epilepsy showed that a lesion of a nerve in the scalp might lead to reflex irritation of the brain beneath with spasm of its vessels and interference with function, and give rise to brain-symptoms without any direct injury to the brain.

He would agree, however, with the opinion as to the comparative innocuousness of trephining when done by proper hands. The comparison that had been instituted as to the gravity of the operation he could not altogether accept, because it failed to take into consideration the possibility of complications, such as erysipelas and septicæmia, which in head-injuries are always more serious than in operations upon the fingers.

As a rule, he would oppose trephining merely for exploration. In cases of brain-tumor, the statement that "it can be done

with comparative impunity" is indefinite. What is meant by "comparative" impunity? In fact, in such cases each is a law to itself: the conditions are never precisely similar. There are not enough cases on record to enable us to lay down rules upon the subject.

With regard to suspected hemorrhage, he offered the recommendation that where symptoms are present which render the existence of a lesion of one of the sinuses probable, the surgeon should act as if it were known to be wounded and operate.

In the case of Dr. Hopkins which had been referred to, in which a brakesman struck his head against the upright of a bridge and produced a simple fracture of the skull with coma, he had applied a trephine and found a laceration of the lateral wall of longitudinal sinus and meningeal hemorrhage. He had great trouble in applying the ligatures, as they slipped off immediately. He then applied a compress of lint sprinkled with iodoform, and placed a larger one upon the top of it, and confined it in place with a bandage. The patient recovered without further trouble.

With regard to cerebral localization, he said that we are now fairly well acquainted with the topography of the brain, and in case of injury affecting the cortical motor centres we can trephine intelligently, but he would advise caution with regard to trephining over the sensory centres, because the lesion is more likely to be deeply seated; and such obscure lesions are likely to be more widespread and less susceptible to surgical treatment. The lecturer recommends trephining over the visual centre for oculo-motor paralysis. How does he decide that the lesion may not be in the optic nerve or somewhere in the course of the fibres of the tract, or at the base of the brain, in the corpora quadrigemina? The cases of monoplegia should also be carefully studied, as they may be due to lesion of spinal cord or nerve-trunk; he mentioned a case of paralysis of the leg due to thrombosis of the posterior tibial vein. He did not believe that the displacing force of a depressed fracture was of any consequence in itself. There are three classes of brain-injury: (1) There is such concomitant injury of the brain that the patient will die no matter what is done, and operation will not influence the course of the lesion. These cases are constantly being placed in the statistics of trephining, but they do not belong there. The patient will die anyhow, and the operation is only done with the view of palliation. There is (2) a class of cases in which the injury to the brain is very slight, and the trephine is used to protect the membranes from irritation and secondary inflammation, which may be summed up under the head of encephalitis. In these, trephining removes the only source of danger and the patient gets well. (3) Between these extremes is another class, of uncertain character and doubtful issue. In reference to them he would say that he believed that the additional danger from the trephine is very trifling.

The statistics of Amidon he thought were misleading; having himself gone over the literature very carefully, he had arrived at the conclusion that the mortality of the operation of the trephining is about ten per cent.

In a simple fracture, with no evidence of pressure and no brain-symptoms, where the surface is smooth he would not incise the scalp, but if the bone were much comminuted and the edges ragged he would trephine without waiting for brain-symptoms. In the former case he would watch for signs of irritation, and if they appeared he would operate. Puffiness of the scalp, or the puffy tumor of Pott, is more likely to indicate osteo-myelitis than internal suppuration. It is possible that they may be associated. Even in the absence of brain-abscess the presence of bony spicula makes the operation necessary. He would always operate in multiple ragged fracture with depression, whether compound or not; in a smooth depression he would trephine upon the first symptoms of mischief, without waiting for the actual appearance of intracranial inflammation. In cases of suppuration in the cerebral lobes he had noticed that the temperature was normal or sub-normal. He thought that this might be of some assistance in diagnosis. The previous speaker had referred to the recovery after a foreign body had penetrated the brain. He would say that such a recovery is a very bad recovery. As the rule, he would prefer to operate and remove the foreign body if possible, to prevent future trouble.

Dr. Peck agreed in the main with the views expressed by the essayist, but believed that the pressure of bone upon the brain and meninges is capable of causing symptoms directly, without inflammation, although secondary symptoms are inflammatory. At the same time he believed that the occurrence of brain-inflammation called for other treatment than merely therapeutical. He cited a case of a brakesman who received a depressed fracture of the temporo-parietal region on the right side. He suffered immediately with symptoms of compression, and remained comatose twenty-four hours. He was then trephined and about two inches square of comminuted bone was removed. He at once began to improve, and in four days had a convulsion, from the result of irritation of brain-tissue due to the original injury. Upon making a free incision into the brain and liberating nearly two ounces of pus, the man subsequently got well. A boy was shot in the temple, producing immediate symptoms of compression. When seen a short time afterwards he was found much depressed. Upon trephining the skull a round clot of blood came away from the surface, but no evidence was obtained of the track of the bullet. The

boy recovered, and is now well, with a bullet in his brain. In this case the patient probably would have died in a day or two without the operation, not from the bullet, but from the blood-clot causing septicæmia. In a third case, in a child, with depressed simple fracture in the median line, recovery took place without operation, no symptoms of compression appearing.

The object of treatment is to remove pressure and favor drainage. He advocated early operation upon the first symptoms of pressure or irritation.

Dr. Prewitt thought the propositions of Dr. Roberts so positive and sweeping that they should be thoroughly discussed. Symptoms of compression may be due to other agencies than inflammation of the brain. Effused blood may produce such symptoms. He thought it possible that he might have misunderstood the lecturer. However, he would state that the danger to the patient from injury to the head is not mainly due to the fact that the skull has been broken, but owing to injury of other structures. The fracture of the bone is not more serious than a fracture anywhere else, but it is commonly associated with injury to the brain or its membranes.

With regard to the risk of converting a simple into compound fracture when there are brain-symptoms present, he would say that there is some additional danger in making the scalp-wound. Even with the advantages of antiseptic surgery we cannot always prevent or control inflammation, yet the operation should be done to relieve the brain from the irritation. A comparison has been made as to the difference between simple and compound fractures of the leg, but he saw a decided difference between them. There is more danger of inflammatory consequences when occurring in the brain than when they occur in the leg. There is certainly more danger, also, of inflammation of the parts below with an open wound than with a closed one. With a smooth depression such as the lecturer had passed around he did not see any necessity for trephining, because the depression is small and the surface scarcely rougher than the natural inequalities of the bone. As in the case of the preceding speaker, such cases may recover without serious symptoms. He would keep such a case under observation, and elevate the bone at the first sign of compression, but previous to that he would not trephine.

Dr. Parkes also differed from the view that symptoms of compression are invariably due to inflammation.

Dr. Gross asked that Dr. Roberts have the privilege of defining his statement. What did he mean by brain-symptoms? The expression seems vague and indefinite.

Dr. Roberts said that by brain-symptoms occurring after fracture of the skull he meant a group of symptoms commonly classed under the head of compression of the brain, such as coma, paralysis, hemiplegia, etc., which he believed are not in reality due to pressure by the bone upon the surface of the brain. He maintained that compression of the brain is a mechanical and anatomical impossibility; the brain cannot be squeezed by an ordinary depressed fracture of the skull. The symptoms of compression so called are symptoms of irritation,—the first stage of inflammation.

Dr. Parkes continued his remarks, stating that he believed that the early symptoms of compression are due to irritation caused by hemorrhage as well as by bone-pressure upon the brain. He did not think that the surgeon has a right to give additional risk to the life of the patient by making an open wound unless the symptoms call for operation. As regards the third proposition, there is no comparison between the two operations.

He agreed as to the importance of drainage, and mentioned a case where fracture of the vault of the skull led to trephining and introduction of a drainage-tube. On the fourth day there was a large flow of cerebro-spinal fluid, which he had never seen in fracture of the vault before. He could only account for it on the supposition that there had been a laceration of the lobes of the brain so as to permit the escape of fluid from the ventricles.

Mr. Lucas, in St. Bartholomew's Hospital Reports, mentions three similar cases in which there was extensive injury of the cerebral tissue and without brain-symptoms. In another case, where a piece of the bone from the vertex had been scooped out as large as a coffee-bean, there was laceration of the superior longitudinal sinus. The edges of the wound in the sinus were brought together with thin interrupted catgut ligatures; the hemorrhage stopped at once, and the patient recovered.

Concerning the effects of brain-lesions upon sensation, he had one case that he would refer to. A man received a blow from the butt of a pistol upon the upper and outer portion of the parietal bone and the upper part of the occipital. There was a compound fracture and perforation. A large amount of brain-substance had escaped and was matted in the hair, and more was forced out of the wound by violent expiratory efforts and vomiting. By introducing his finger into the wound he felt a hard substance lying upon the tentorium cerebelli: it was the "sight" of the pistol, which had been broken off. In this case, although there should not have been any sensation at all, sensation was well preserved. This case also illustrates the importance of drainage. The tube was introduced, and the operator left the patient in charge of another physician. In the course of a week symptoms came on of brain-lesion, paralysis, high temperature, etc. He was again summoned to the case, and found that the drain-

age-tube had been displaced. He replaced the tube, kept it in position, and the patient recovered.

Dr. J. Collins Warren confirmed the remarks as to the importance of drainage. One of the difficulties is the swelling of the tissues and increased intracranial pressure, which causes the membranes to press against the ragged edges of the opening in the bone and thus increase the injury to the tissues. In considering this we are impressed with the great difficulties in the way of correct diagnosis. Head-symptoms may also be due to external lesions, as periostitis and cellulitis. He cited a case of a child with perforated fracture of the cranial vault. At first there was no evidence of brain-disorder, but there was some fever; at the end of a week the child was found to be perfectly deaf. The child died, and at the autopsy an accumulation of pus was found in the fourth ventricle, obviously beyond the reach of the trephine.

In another case of fracture of the skull there was absolutely no blood or effusion into the brain, although some blood was found in the peritoneal cavity. There are cases in which there are "brain-symptoms" without injury to brain-structure. He had had two such cases this winter. Both had injuries over the occipital bone; the first got well after showing symptoms of fracture of the base of the skull, the second is still going on. When seen a week ago, there was found a collection of pus in the tissues of the scalp outside of the brain, with great improvement in the mental state. We must take into consideration all the various causes which may give rise to the symptoms of so-called concussion of the brain, such as hemorrhage, septicæmia, and other conditions.

A case illustrating the localization of brain-lesion was treated in the Massachusetts General Hospital. The patient had a blow upon the head in the parietal region, with hemiplegia of the opposite side. He began with paralysis of the inferior extremity, next appeared a slight paralysis of the arm, and finally the same side of the face became paralyzed. Dr. Walton, who studied the case with him, arrived at the following explanation: there was a slight effusion commencing at the upper part and posterior to the fissure of Rolando, which gradually had worked downwards and upwards, successively involving the hand and face centres. What strengthened the diagnosis was the fact that the improvement took place in exactly the same order. The patient regained the use of his leg and arm, but still has some paralysis of the buccinator and other facial muscles.

Dr. Tiffany said that in the treatment of wounds most surgeons prefer keeping them closed if possible; and they do not convert simple into compound fractures needlessly. Besides the operation of trephining there is the original injury for which the operation was demanded; which is not a normal condition. Certain monkeys have been cited which had their heads opened with impunity; but in man the operation is not undertaken in a state of health, but in one of disease, which materially alters the conditions.

There is no comparison between the relative importance of trephining and amputation of the finger.

The recommendation to use a very large trephine, or half of a large one, he thought unnecessary. Why not apply the ordinary trephine more than once?

With regard to the relative size of wounds of inner and external tables of skull, it depends upon the direction of the force: if a man shoots himself under the chin and the bullet escapes at the top of his head, the wound of exit will be larger in the outer table than in the inner table.

He thought that there should be a hard and fast line drawn between fractures of the skull in childhood and those in the adult. The prognosis is widely different. He had seen depressed fractures in children get well without operation, which he certainly would have trephined if they had been adults. He cited a case of a boy with a depressed fracture, so marked that a finger could be laid in the depression, in which he did not operate, and the boy recovered: the groove still remains in the skull, but it is gradually springing out into shape.

There is also a difference between the negro and the white race: there is not nearly so much reaction in the negro race after operation. There can be no doubt as to the different course which inflammation takes in the two races.

The lecturer speaks of simple fracture of the skull in cases where "there is no evident depression and no brain-symptoms;" he regarded this as an impossible diagnosis. Again, in comminuted fracture, with no evident depression and no brain-symptoms; this is an impossible accident. Finally, where there are brain-symptoms *without* evident depression, the lecturer advises operation. But where would he apply his trephine?

Dr. Gross said that in army records it is not uncommon to have a fissured fracture from gunshot injury, without evident depression, but with brain-symptoms. In such cases there may be extensive meningeal hemorrhage from laceration of the dura mater, the symptoms of compression coming on much more gradually than where a branch of the middle meningeal artery is ruptured.

He did not regard a compound fracture as favorable as one that is not compound: this is especially true of fractures of the skull, even with the aid of antiseptic precautions, which are applied with difficulty to head-injuries.

Having carefully gone over the subject of the operation of trephining, he was in a posi-

tion to say that the tables of Amidon are utterly unreliable, because the facts had been made to fit a theory. They will not bear careful examination.

He agrees with the lecturer with regard to the importance of drainage after brain-injury, although it is not always easy to carry it out. He referred to Dr. Weir's remarkable case,* where a breech-pin of a gun was embedded in the brain, where recovery was secured by careful and thorough drainage. He thought that there was a great future for operative surgery in this direction.

He wished that some decisive rule could be laid down as to the proper line of practice to pursue in these cases of intracranial injuries, because a serious medico-legal question is involved. In case of gunshot wound of the cranium shall we open the vault and make a careful examination, remove fragments of bone and foreign substance, and insert a drainage-tube? If we do, and the man dies, the prosecuting attorney will be met with the defence that the doctors killed the man, and not the one who shot him. On the other hand, if we refrain from this course, the plea is made that the patient died for want of proper treatment. Under such circumstances murderers cannot be convicted; and, indeed, one has just escaped the full penalty in Pennsylvania because of this uncertainty. Such cases certainly should be treated, and the precise rules should be formulated. In this connection he called attention to the case of Dr. Fluhrer, published in the *New York Medical Journal*, in which, a gunshot wound of the frontal region being found, and the track of the bullet detected by a soft probe, a counter-opening was made in the upper occipital region, and the ball found and removed. A drainage-tube was then carried through the brain from one opening to the other until the track closed and the patient recovered. A most instructive case, treated in accordance with strictly scientific principles.

Dr. Moore thought that this was a subject upon which the Society should give a very decided opinion. Gunshot wounds of the skull are common; frequently they are suicidal. A man shoots a ball into his brain: what is to be done? He was much interested in the cases cited by the last speaker, and reported a similar case which he had lost from want of proper drainage.

The drainage of wounds he regarded as indicating a great advance in surgery; the drainage of brain-wounds is certainly modern. He alluded to the difficulty of finding a missile by a counter-opening; the ball, after passing through the hemispheres of the cerebrum, may glance from the inner side of the skull and embed itself in the brain. In this case a counter-opening would not expose the bullet. He expressed a fear lest the use of drainage-tubes or probes might lead to injury, and deprecated the use of any force in their introduction. He had not much faith in the value of statistics of trephining, and would be guided by the indications present in the individual case. He hoped that the surgeon would not be deterred from doing his duty by popular sentiment, and should not pay much attention to the silliness of juries or the follies of judges.

Further discussion of this paper was postponed until the following morning.

MISCELLANEOUS BUSINESS.

Dr. Tiffany reported that the auditing committee had examined the Treasurer's accounts and found them correct. Committee was discharged.

On motion of Dr. Mears, the Secretary was directed to communicate with the Surgeon-General of the Army, the Surgeon-General of the Navy, and the Supervising Surgeon of the Marine Hospital Service, and invite them to attend the session and participate in the discussions.

Dr. Billings announced that an excursion had been arranged for the Fellows to visit Johns Hopkins University and Hospital, Baltimore, on Wednesday afternoon. Upon motion, the invitation was accepted.

It was also announced that the annual dinner would be held at Wormley's Hotel on Thursday evening, April 22.

The committee appointed at the last meeting on Results of Operations for Resection of the Ankle-Joint, through Dr. P. S. Conner, its chairman, reported progress and was continued.

Second Day's Session.—Dr. Prince said that comparing present results of treatment of injuries of the brain with those under the old methods, he observed a great advance. He had not seen a case of hernia cerebri since the introduction of antiseptic methods into his practice. At the same time he did not regard trephining as a minor operation; for although the operation is simple enough, if septic poisoning occur the wound of the scalp is more dangerous than the wound of an extremity; in the case where the brain is involved, death is almost certain to follow.

With regard to trephining for insanity, the operation had not been sufficiently frequently performed to lay down rules for it. He had operated in one case. The advances in surgery of the brain are such that many lives are now saved which would under older treatment have been lost.

Dr. Brinton said that this is a comparatively new field for surgery, and it might be expected that some mistakes will be made at first. He disputed the first proposition, and declared that in cases with depressed fracture the symptoms in the great majority of the cases are not due to intracranial inflammation. The displacing effects of depressed

* American Journal of the Medical Sciences.

fracture is the point to which we direct our treatment. In a recent case of fracture extending across the frontal bone, arching from one external angular process of one side to that of the other, the upper fragment overlapping the lower, the patient was perfectly comatose. Upon elevating the bone it sprang into place with an audible snap. In a very short time the coma disappeared, the patient became conscious, and was able to speak rationally before he (Dr. Brinton) had finished washing his hands.

With regard to the comparative gravity of the operation, when we reflect upon the effects of the admission of air into wounds and the disturbance following inflammation of the brain, we cannot regard trephining as an insignificant operation. Another danger has been already alluded to,—the opening of a sinus, and the difficulty of tying a sinus laterally. He recalled the case of a child kicked by a trooper's horse, making a comminuted fracture and laying open the lateral sinus. The wound in the sinus was freely exposed and ligatured, and the child recovered. He thought that the difficulty generally is experienced because the opening in the skull is too small, and advocated trephining in order to increase the field in which to operate. In cases of injury to the cranium without brain-involvement, it is very difficult to decide whether to trephine or not. If the patient is operated upon it may increase his risk, and if he recovers without operation he may afterwards develop insanity and epilepsy. His own rules had been those laid down by Prof. Gross in his System of Surgery when considering this topic, where the whole argument is well summed up. [In conclusion he read extracts from Gross's Surgery bearing upon this discussion.] To this little can be added and little can be taken away.

Dr. McGraw said that cases of depressed fracture of long standing without brain-symptoms are rare. He reported the case of a negro, a house-painter, who had a perfectly smooth, depressed fracture of the skull. At first he was stunned, but afterwards recovered consciousness and went about his work. The man after several months had dizzy spells, and came into the hospital for treatment. A year after the original accident, a disk of bone was taken from the centre of the depression and the bone was elevated. The dura mater bulged out of the opening, showing increased tension; but there was no irritation, the bone being perfectly smooth. The man recovered perfectly, and is now at work on scaffolds five stories high. He has no more dizziness and no more brain-symptoms.

He would take exception to Dr. Nancrede's statement that removal of the irritating portion of the bone does not avail after inflammation has occurred. In a case of felon of the finger we remove the bone and secure free drainage, and in brain-inflammation we can relieve tension and remove the source of irritation, and give a better chance of recovery.

Dr. Conner was in accord with the general principles of the paper, but he regarded trephining as an operation not to be lightly entered upon. Where the patient is suffering from a depressed fracture, the inner table being broken and forced in upon the membranes, in such cases the chances for the patient are much better after trephining, because he is relieved of the immediate cause of irritation and source of subsequent danger. It has been well said that the conditions in children are very different from those in adults. He was impressed by the remarks upon gunshot wounds of the brain, and the recommendation to use large probes and drainage-tubes. Apart from the danger of injury to the brain, he recalled the fact that the teachings of modern writers are that the chief injury is not from the bullet-wound or from splinters of bone, but from the entrance of air containing germs. He would hesitate before recommending the introduction of probes and drainage-tubes except with the greatest care.

As regards the symptoms of compression, he stated that in eighteen out of twenty cases of simple depressed fracture no serious results follow. In most cases where brain-symptoms are present it is the result of the accumulation of blood and other material which gives trouble. He preferred not to open such a fracture at once, but to wait for some indications for treatment. Early trephining may save some that would otherwise be lost, but on the other hand it may cause some to die who would otherwise recover.

Dr. Dandridge reported a case of linear fracture, with paralysis of the muscles of the forearm of the right side, and frequently recurring spasms of the left side, including the face. The spasms recurred every few minutes. The man's mental condition was also affected. There had been incomplete unconsciousness for some time after the accident. When first seen, six days after the injury had been received, he could answer questions, but was somewhat confused. These symptoms pointed to a lesion of the brain upon one side. It was decided, after some hesitation, not to interfere. At the end of a few months the patient had completely recovered, except a slight numbness in his right little finger. All of his symptoms had disappeared at the end of a year. This case bears directly upon the subject of the paper. If he had seen the case immediately after the accident, with such symptoms, he would probably have trephined, but when seen some time afterwards it did not seem as if sufficient brain-injury existed to warrant an operation.

Scarcely sufficient consideration has been given in the discussion to the position of the fracture. If we wait for paralysis in cases of fracture of the frontal bone, we may wait so

long as to affect the chances of recovery. On the other hand, in fractures over the motor area paralysis occurs very soon. He wished to call attention to this point, the locality of the fracture as affecting the rules of treatment.

Dr. Watson narrated a case of a policeman who received a depressed fracture at the inferior anterior portion of the parietal bone. The patient, a man 36 to 40 years of age, was unconscious. There was found a fracture of the external table. He hesitated about operating, but decided against it. The patient suffered for about three weeks with brain-symptoms, including delirium, but finally recovered. At the end of six months he was able to go around, but there was still inability to articulate and some loss of hearing. When examined a year afterwards there was still some depression in the skull, but he was able to perform his duties as a policeman. In children the brain will accommodate itself to a considerable amount of depression, and this is also true in some cases in adults.

Dr. Briggs, at the request of several Fellows to give his views, called Dr. Hutchison to the chair, and said that he had already expressed his opinion upon the operation in his former paper. As regards the nature of the injury, there are two classes of cranial injury. There is a diffuse injury of the brain, as where a man falls from a house-top upon his head. In such cases a trephine cannot do any good. In a second class the injury only extends to the bone itself, or very slightly beyond. It is in these that trephining is called for, and only these, because by it we can remove broken pieces of bone and prevent injury to the brain.

With regard to the treatment of cases of simple depressed fracture without brain-symptoms, he thinks that trephining is for the most part entirely unnecessary. As to the question of the cause of the brain-symptoms in depressed fracture, he would not attribute them all to inflammation. The depressed bone causes certain molecular and circulatory changes in brain and membranes upon which it presses, and the effects of brain-compression and concussion run into each other and are not very distinct. In simple depressed fracture which is round and smooth, where the symptoms are those of concussion, trephining is useless. On the other hand, where blood is pouring out, the symptoms demand trephining in order to save the patient.

If the brain-symptoms come on a few hours after the accident, then we expect hemorrhage and trephine; or if we have reason to suspect the presence of pus we should remove it. The only call for the use of the trephine in simple fracture is the presence of spicules of bone pressing upon the membranes. In these cases we may or may not have at once symptoms of compression or concussion. In a few hours we have symptoms coming on of a different kind, due to irritation. We find the patient with his knees drawn up in bed, with spasms of the muscles of one arm or leg, or twitching of the muscles of his face, and in a semi-comatose condition. Now, when these symptoms are present, indicating irritation of the brain, it is the surgeon's duty to operate at the earliest possible moment, in order to prevent further injury and stop the beginnings of inflammation. Trephining, he thought, should be limited to the conditions he had cited. After inflammation has begun, the trephine cannot do any good, except to remove a source of irritation. The patients generally die.

With regard to transforming a closed wound of the cranium into an open wound, none of those who discussed the question appear to have taken into consideration the anatomical condition of the bone itself and its surroundings. In the cranium the bones are well nourished, and surrounded by firm structures abounding in blood-vessels; they have no medullary canal, and in many respects differ from the bones of the extremities; they also heal readily after fracture. It had always been his practice, whenever there are any symptoms which seem to demand it; he has had no hesitation in cutting down upon the bone and incising the bone itself. With regard to the danger of the operation, he did not think that the danger was in the operation itself; it is not a serious operation to remove a portion of the fractured bone from the skull, but these injuries are usually attended by serious lesions of the brain. The operator is also liable to further injure the brain in his attempts to elevate the bone; in skilful hands, however, it is a safe operation, though not, as said by Dr. Roberts, to be compared with amputation of the finger.

With regard to operation for exploratory purposes, he would not always agree with the lecturer. Now, if there are no symptoms present and no evidence of depression, no operation would be called for; but where such symptoms are present it is the duty of the surgeon to make such exploratory incision, and the operation would be less dangerous than to leave the patient to suffer from the effects of the inflammation.

With regard to hemorrhage, he had not had a case where he was so unfortunate as to open a sinus with the trephine; but if such a laceration should occur, a slight pressure with the finger followed by a graduated compress treated with some antiseptic substance would be sufficient to stop the bleeding. He did not think the application of a ligature to the lateral wall of a sinus at all necessary: a slight amount of pressure only is needed to close the vessel.

Dr. Roberts, in closing the discussion, said that his statements had been to a certain extent misunderstood; the propositions he had laid down were not final, and a careful exam-

ination of them would show that they were not absolute. He had worded them very carefully so as to make them general; they were rules to which exceptions are expected.

With regard to the comparison between the results of amputation of a finger through a metacarpal bone, and trephining, it is useless to say that no comparison can be made, because it has been made: he had taken Ashhurst's table of mortality after finger-amputations and compared it with Amidon's table of trephining; and even allowing the possibility of error in the latter doubling the mortality,—allowing that Amidon had been twice too sanguine,—still his statement held good that the operation of trephining is little, if at all, more serious than the finger-amputation.

He insisted upon his statement that the brain can be pressed upon but not compressed by a fracture: from anatomical reasons, squeezing of the brain itself is impossible under ordinary circumstances. The brain can accommodate itself to pressure by discharging some of the cerebro-spinal fluid into the vertebral canal. He had been asked if the symptoms coming on immediately after depressed fracture were not due to compression. He answered, no; they are due to shock, injury of brain, or to that obscure condition known as concussion, which he did not believe in, but considered it due to multiple laceration of the brain. It was stated that the symptoms come on too quickly to be due to inflammation; but irritation can come on very quickly, and he considered irritation as the first stage of inflammation. If the brain were hard enough to be compressed by an ordinary depressed fracture, it would be hard enough to stop a hemorrhage and prevent extravasation of blood. Secondary symptoms are always due to inflammation. In the case quoted where the symptoms disappeared, and it was inferred that they had been caused by a blood-clot, he could not accept this explanation. With regard to closed and open wounds he would merely say that the closed are better, except where there is pressure for accumulation and retention of secretions, when an open wound is better than a closed one.

With regard to exploratory trephining, as the question had been asked, he would say that, in case an accident should occur and his own skull should be fractured, if there was any obscurity about the case he would thank any Fellow who would trephine him. Referring to gunshot wounds of the brain, he said that Fluhrer's case had been treated in a most skilful and scientific way and with the greatest care. The probe was not forced into the brain, but simply allowed to follow the course of the bullet; the trephine was applied in the occipital region, the ball removed, a drainage-tube carried through, and the patient recovered. The treatment should call for the greatest admiration.

With regard to absence of phenomena produced by injuries in the posterior region of the brain, in the case reported of injury in the occipital region, he said that the lesion was too far back. The sensory area is in the posterior parietal region, and not in the occipital. The case does not affect the position taken. Of course, in the diagnosis we must eliminate deep-seated injury, hysteria, and other neuroses. He had not recommended the use of the half-trephine because the large trephine was too big, but on account of the inequality of the skull in thickness. In localized lesion we need a large trephine, but for ordinary cases for elevating fracture it is difficult to get them small enough.

In cases of fracture of the skull in children and negroes, the conditions are acknowledged to be different from ordinary cases. Depression of the outer table of the skull may occur in the negro without fracture of the inner table. In cases of fracture of the base of the skull, the course generally recommended is to leave them alone. In a child with fracture of the skull, where pressure upon the parietal bone caused blood mixed with air to flow from the ear, he concluded it was a fracture extending into the petrous portion of the temporal bone; he trephined him, removing a number of small pieces of bone; the child recovered. Under the old treatment the case would have been left alone.

In conclusion, he would say that he had not stated that the trephining should be done in all cases except two; but, on the contrary, that under two circumstances trephining never should be done; in others it was possible that it might be done; in others it was the duty of the surgeon to trephine under certain circumstances; while in others it was always the duty of the surgeon to trephine.

In obscure cases he would obtain all the information possible to throw light upon the case, shave the scalp, examine the skull, and, if a doubt still existed, then the indication is to trephine. With regard to the statements of the late Prof. Gross which had been quoted, he would say that he was an advocate of greater freedom in resorting to this operation, and it was because he was a pupil of Prof. Gross that he had written the paper he had presented.

With regard to trephining for hemorrhage, referred to in the paper, he had been pleased to notice a recent article in a German medical journal, in which the value of the operation of trephining in cases of suspected hemorrhages was referred to in the highest terms.

NEPHRECTOMY: ITS INDICATIONS AND CONTRA-INDICATIONS.

Dr. S. W. Gross read an abstract giving the statistics of two hundred and eleven cases of extirpation of the kidney, of which one hundred, or forty-seven per cent., died. It will therefore be seen that this operation

is a very grave one. From an extensive acquaintance with the literature of this subject, he had come to the conclusion that it is too often resorted to. The object of the present paper was to compare results of the operations of nephrectomy, nephrotomy, and nephrolithotomy.

Taking up the statistics of nephrectomy, it was found that the lumbar operation is safer than the abdominal. The percentage of recovery by the lumbar operation is greater by eleven and one-half per cent. than by the other method. Referring to the operations of Knowlsley Thornton, and his statement that the reason why the lumbar operation is safer is because a greater number of healthy kidneys have been removed by it than by the abdominal method, the speaker did not believe this to be true. He had found that where normal kidneys had been extirpated, as in cases of urinary fistule caused during the removal of tumors, the lumbar operation saved 23.34 per cent. more than the abdominal, and in diseased kidneys the results were better by 8.40 per cent. by the lumbar incision than through the anterior wall of the abdomen. He next proceeded to take up the indications for nephrectomy.

(1) *Sarcoma in adult subjects.*—Of these he reported fifteen cases, of which nine died as the direct result of the operation. Of the six survivors, one only was alive at the end of five years. Thus, of the cases reported by Martin, of Berlin, of a disease which is fatal without operation, forty per cent. survived, on the average, 30½ months.

(2) *For non-malignant morbid growths.*—In benign renal tumors nephrectomy is sometimes demanded, and may be successfully performed.

(3) *For tuberculosis of kidney in its early stage.*—Nephrectomy during the early period of tuberculosis of the kidney in twenty cases had given forty per cent. of recoveries. In eight cases which recovered, the average duration of life was twenty months. Previous nephrotomy in these cases was not advantageous; removal of the diseased organ is better at the beginning.

(4) *For rupture of the ureter.*—In such cases the only thing to be done is to form a urinary fistule or perform nephrectomy,—not nephrotomy. Then there is a class of cases in which nephrectomy should be performed only after the failure of other treatment. In hemorrhage following laceration of the kidney, the first thing to be done is to make an incision in the groin and establish drainage; and if this does not effect a cure we should resort to nephrectomy.

In those cases of incised wounds of the loin where the healthy kidney projects through the open wound, this is not an indication for its removal. Replace the kidney; it can be removed later if necessary.

In recent wounds of the kidney or ureter during the operation of hysterectomy or hysterotomy, he held that the kidney should not be sacrificed primarily, on account of the additional shock to the patient. In such cases he contended that it is better to fix the ureter in the line of the abdominal incision, and postpone further operation until the patient has recovered from the first one.

In suppurative lesions of the kidney the organ should not be removed in the first instance. In 63 cases of nephrectomy for pyelonephritis, 32 recovered, 31 died. Out of 89 cases of nephrotomy for the same condition, 77 recovered and 22 died; therefore the recoveries are in favor of nephrotomy by nearly 25 per cent. There is one very interesting point in connection with this class of cases,—it is this: that primary nephrotomy greatly reduces the dangers of subsequent nephrectomy. From a review of all the cases of which the statistics are presented, it will be observed that by preliminary nephrotomy 46 per cent. of the cases will be saved.

In cases of hydronephrosis nephrectomy as compared with nephrotomy is less successful; there are 30.42 per cent. in favor of the latter operation. Therefore our line of treatment is the same as in suppurative conditions of the kidney. With reference to the statistics of hydronephrosis after nephrotomy, there were 38.46 per cent. of survivors; in about 10 per cent. urinary fistule persisted. As in the former class of cases, nephrectomy can be subsequently resorted to if nephrotomy fail.

(5) *Cases of stone in the kidney.*—Three cases have been reported of nephrectomy for stone in the kidney, and all recovered. He had arrived at the conclusion, however, that nephrotomy should first be resorted to. After nephrotomy the mortality has been 9.52 per cent. One point should be kept in mind: in cases of calculus in an otherwise healthy kidney the exploratory incision should be made in the loin, so that it can be utilized in case it is afterwards found necessary to resort to extirpation.

(6) There is another class in which there is painful bleeding from the kidney. In 22 cases of nephrectomy for this condition 13 were saved, 9—*i.e.*, over 40 per cent.—died. The operation is an extremely lethal one in this class of cases. Nephrotomy was performed 17 times, with 16 recoveries and 1 death, or 5.58 per cent. perished. Nephrorrhaphy failed in nine of the cases. In two of the cases nephrectomy was afterwards resorted to.

Contra-indications.—Nephrectomy should not be resorted to in cases of *sarcomatous kidney in children.* In 13 operations 4 recovered, 9 died; and in all those who recovered the disease returned. The primary mortality is about 70 per cent., and the final result death in every one from a return of the disease, eighteen months being the longest survival.

Nephrectomy should never be performed for *cancer of the kidney*. In 12 operations 2 lived, 10 died, or 83.33 per cent. mortality; of the two cases which survived, one lived 44 days, the other 60 days, therefore the operation failed to prolong life in this condition.

Nephrectomy is also contra-indicated in the *advanced stage of tuberculous disease*, in which there is tuberculosis of other organs besides the kidney.

[By resolution, discussion was postponed until after the reading of Dr. Tiffany's paper.]

NEPHROLITHOTOMY.

Dr. L. McLane Tiffany, of Baltimore, reported a case of nephrolithotomy and made some comments upon the operation.

The patient was a man, in the pelvis of whose right kidney a physician had diagnosticated trouble, and had brought the case to the reporter's observation. He obtained the following history. The patient was 26 years of age, married, and was the father of one child. He began at the age of 17 years to suffer with occasional paroxysms of pain in the right loin. About six years ago he noticed that the urine was very light in color and deposited a sediment, but he had no difficulty in passing water. On the 4th of July, 1884, he was suddenly seized with an attack of pain in the right side, extending from the back to the front, and running down the thigh, with pain and retraction of the testicle. Afterwards these pains recurred frequently, the paroxysms being more severe in the day than at night. He had taken various remedies without relief, and was taking much morphia, and could not live without it. Upon examination there was tenderness in the right loin, muscles of the right lumbar region were contracted. Moving the limb caused him pain. The percussion-note was duller than upon the opposite side. The urine contained pus and considerable sediment. Operation was performed February 21, 1885. Kidney was exposed by incision in the right lumbar region, then opened at the side by Paquelin's thermo-cautery, and a stone removed in fragments from the pelvis of the kidney, weighing in all 556 grains. It was composed principally of phosphate of lime. The hemorrhage was insignificant, and ceased with reaction. A drainage-tube was inserted and antiseptic dressings applied. Forty minutes after the operation the patient passed water from the bladder, and complained of its burning. Patient sat up in a week, and, in short, made an uninterrupted recovery. A small sinus still exists, which gives no discomfort. Two interesting facts were noted during the treatment. For the first few days, while the urine flowed through the wound the urine discharged from the bladder was clear, and did not contain any pus; afterwards pus reappeared. This showed that the other kidney was probably healthy,—an important point in case extirpation of the diseased organ should come up for consideration.

Nephrolithotomy is a good term introduced by Henry Morris, of London,* to designate the operation of incision of the kidney for the removal of a calculus, the organ not being dilated by pus or urine; it does not apply to operations for the removal of stone from the centre of a suppurative cavity, the stone having escaped from the kidney, or where sinuses exist leading down to the stone. He believed that the time would come when the question of operation will be more generally considered, and thought it should be resorted to earlier than it has been, as in the recorded cases the patients have suffered a number of years before the operation was performed. As regards the subjects of stone in the kidney, it is slightly more frequent in males, and occurs more often in the left kidney than in the right, though the difference is not very great. An hereditary element is sometimes found.

As regards the symptoms, they appear early in life generally. Pain is almost always present; the paroxysms of pain being more frequent in proportion to the acuteness of the case. Exacerbations are sometimes due, however, to change in the position of the stone, or its becoming the cause of suppuration. The pain shoots down from the loin to the testicle, which is retracted, sometimes down the inside of the thigh. Exercise or exertion always causes pain, especially movements of the muscles of the back. Lumbar muscles sometimes strongly contracted, and also the outer fibres of the external oblique; but this disappears on etherization. The secretion of urine sometimes interrupted. Urine may contain blood and triple phosphates as well as pus and albumen. In other cases these may be absent. Sometimes the reaction changes abruptly from acid to alkaline. The blood in the urine is liable to appear in proportion to the amount of exercise, and also after paroxysms of pain.

Directions for operation.—The incision for the exploration of the kidney is to be utilized for the removal of the stone if found. It is to be made in the lumbar region, through the fibres of the quadratus lumborum muscle and the outer edge of the erector spinæ. The finger is then introduced, after exposing the kidney, to search for stone. Failing to recognize a stone by the touch, a needle may be introduced; but this he would think unnecessary, because opening the kidney is warranted by the symptoms. Paquelin's cautery is used to incise the kidney; the bleeding is usually very slight, and can be checked with hot water. The finger is the best probe for examining the pelvis of the kidney. The calculi, which are easily detected and often small, usually consist of lime oxalate and lime phosphate.

* Clinical Society's Trans., vol. xiv.

The operation will finally take its place among the most successful of major operations.

Will the kidney return to its normal condition? It is too soon to answer this question. We might expect it to do so after removal of a foreign body; the patient was quite satisfied with the final result. Two points seemed of special interest in this case: First, the fact that the bladder could be irrigated through the ureter is very interesting. When a nephrotomy has been done and the question of the removal of the kidney is contemplated, the corresponding ureter may be plugged, so as to obtain the secretion of the other kidney in order to determine its condition. The operation has been compared with lithotomy of the urinary bladder, in which the rule is to operate as soon as the stone is found. He thought the question of age was one of great importance in both cases.

A certain number of cases have been diagnosticated by competent surgeons as stone in the kidney in which no stone could be found subsequently. He referred to two cases reported as cases of nephrolithotomy, one reported by Le Dentu (*Bulletin de Thérapeutique*, 1881, p. 343) and one by Lloyd (*London Lancet*, June 2, 1883, p. 948), which he considered did not come properly under the head of nephrolithotomy.

The symptoms of kidney stone may be so closely simulated as to deceive any one, but, while the diagnosis is in doubt, the question of operation is not. To the comparison of the kidney stone and that of the bladder he would add the note that in cases of chronic inflammation both organs may demand incision and rest. To bring about a cure of chronic inflammation is still further applying the common rule to different parts of the urinary apparatus, and so simplifying surgery.

Dr. Gross said Dr. Tiffany is to be congratulated upon the successful termination of his case, the more particularly because he has removed from an otherwise healthy kidney the largest calculus that has yet been recorded, the only one approaching it being the concretion, weighing nearly one ounce, excised by Mr. Bennett May.

As Dr. Tiffany has stated, the operation is a comparatively safe one. Thus, of 21 cases that he (Dr. Gross) had collated, 2, or 9.52 per cent., died,—the patient of Cullingsworth from the blocking of the opposite ureter by a stone, and that of Mr. Pepper, as he wrote to him personally, from the effects of morphia. In Mr. Thornton's three cases the operation was by the combined lumbar and ventral incision.

In the cases of Butlin, Anderson, and Cullingsworth, the stone was removed through an incision in the pelvis of the kidney. He quite agreed with the author of the paper in regarding the diagnosis of such calculus as being far from easy. Intermittent attacks of renal colic, with tenderness on pressure, the presence of blood, and it may be of a little pus, in the urine, with frequency of micturition, are in the absence of vesical and prostatic lesions the best diagnostic signs, but they may be present in cases of highly acid urine, and in the early stage of tuberculous kidney. The group of symptoms just mentioned being present, the surgeon is certainly warranted, after the failure of ordinary remedies to relieve them, in cutting down upon the kidney through the loin, with the view to its exploration with the fingers or with the needle, and, if needed, by an incision of the kidney-substance itself, through which the finger can be carried into the calices and pelvis of the organ. And this brought him to the third conclusion, that "incision down to and exploration of the kidney is eminently proper," in which he entirely agreed with Dr. Tiffany. Thus, of twenty-two exploratory operations which he had collected all recovered, and the pelvis of the organ was incised in three. Should incision in every case of failure of the ordinary methods of exploration to detect a stone be the practice of the future, the risks will doubtless be added to; but he believed that Mr. Morris is right in recommending its adoption. It should certainly be resorted to before the kidney is sacrificed by extirpation.

Dr. Gouley referred to a case reported in the Transactions of the New York State Medical Society, vol. i., which he presented to the Association. He thought it was of advantage to break a large stone into fragments before attempting its removal, and he recommended the operation of litholaclasty with nephrolithotomy. The composition of the stone was interesting. In a case presented last year of so-called prostatic concretion, the statement was made that it must be prostatic because it was phosphatic. He then had made the point that a phosphatic concretion could form on any mucous surface. He believed that incision through the lateral surface of the kidney was better than one in the median line or in the pelvis of the kidney, and believed that statistics would bear him out in this assertion.

Dr. McGraw said that he had very little experience on the subject, because they have very few calculous disorders in Michigan. He thought this might illustrate a point in pathology. The vesical stones we have are almost always the result of obstruction, and follow stricture of the urethra, enlarged prostate, etc. We have cases of abscess of the kidney, and have noticed that where the ureters are pervious no calculi are formed—he spoke of Michigan. But where the ureters become thickened and coated with phosphatic deposit, calculi are formed. In a case of pyæmia occurring last winter he found after death that there were abscesses in the kidney, with secondary changes in the ureters, and a stone was found in the kidney, which he re-

garded as a secondary and not as a primary development.

Dr. Conner referred to the difficulty of diagnosis, and felt encouraged to perform exploratory nephrotomy in cases of doubt.

Dr. Prewitt asked whether it would not be better to make the incision through the pelvis of the kidney rather than through its structure.

Dr. Tiffany, in reply to Dr. Gouley, said that the case he had referred to was one of calculous pyelitis. It was not a case of simple removal of a stone from the pelvis of the kidney. As to the incision into the kidney, he had made it through the structure in preference, as he thought the chances of closure without a permanent fistule were better when made through the gland-structure. He would not disturb the kidney in order to operate in the median line, but preferred to cut into the portion of the kidney which presented itself at the wound.

Dr. Gouley could not understand why Dr. Gross and Dr. Tiffany wished to exclude the case in the Transactions of the New York Society on account of pyelitis, although a stone had been removed by operation. He maintained that a stone could not exist without causing inflammation.

Dr. Gross said that the operation of nephrolithotomy is applied to the removal of a renal calculus from a kidney not distended by pus or urine. He did not think the case referred to by Dr. Gouley was of this kind. With regard to the location of the incision, in 18 cases in which the renal substance itself had been incised, three cases of abundant hemorrhage occurred, which, however, was checked by plugging the wound with sponge, so that the risk of hemorrhage is not very great. The only additional danger in incising the pelvis of the kidney is that of renal fistule. In the three cases of Butlin, Anderson, and Cullingsworth, the pelvis was incised; in the other fifteen, the incision was in the parenchyma. Therefore, we say, operate upon the most convenient portion. In conclusion, he thought that operation for stone in the bladder was in no way comparable to nephrolithotomy.

(Proceedings continued in the next number.)

MISCELLANEOUS BUSINESS.

At the executive session, held April 23, the following officers were elected:

President.—Moses Gunn, Chicago.

Vice-Presidents.—Christopher Johnston, Baltimore; Thomas P. Russell, Oshkosh, Wisconsin.

Secretary.—J. R. Weist, Richmond, Indiana.

Treasurer.—J. G. Brinton, Philadelphia.

Recorder.—J. Ewing Mears, Philadelphia.

Members of Council.—Hunter McGuire, Phineas S. Conner, John S. Billings, Louis McLane Tiffany.

Committee of Arrangements.—Drs. J. S. Billings, J. Ford Thomson, and L. McL. Tiffany.

Next place of meeting, Washington, D.C., on the Wednesday next preceding the meeting of the American Medical Association.

The following Honorary Foreign Associates were elected: Sir James Paget, Mr. John Eric Erichsen, Sir Joseph Lister, Thomas Annandale, Edinburgh; Prof. Friedreich Esmarch, Kiel; Prof. Von Langenbeck, Berlin; Prof. Volkmann, Halle; Prof. Czerny, Heidelberg; Prof. Billroth, Vienna; Prof. Von Nussbaum, Munich; Prof. Verneuil, Paris; Prof. Ollier, Lyons.

The following new Fellows were elected: W. H. Carnalt, J. Ford Thompson, Washington; J. Edwin Michel, Baltimore; Roswell Park, Buffalo; Theodore R. Varick, Jersey City.

The following rule was adopted:

At the next meeting of the Association no Fellow shall occupy more than one hour in reading his paper.

The recommendation of the President with regard to a number of Honorary Fellows was approved, and they were elected.

It was not deemed expedient to extend the limit of membership above one hundred.

Dr. Weist announced an amendment to be acted upon at the next meeting changing the limit of number of Fellows from one hundred to one hundred and fifty, so that the membership may be increased to one hundred and fifty.

A committee was appointed to prepare a memoir of Professor Gross for the Transactions.

The Publication Committee presented a communication in explanation of the delay in issuing the last volume of the Transactions.

Dr. Mears moved that all papers shall be promptly handed to the Recorder; and that the reports of the discussion sent out to the members shall be returned without delay, on penalty of being omitted from the Transactions.

Dr. Gross amended the resolution by making thirty days the limit of time for the return of original draughts or proofs sent to the Fellows.

The motion was adopted as amended.

By unanimous consent, it was decided to place the vignette of the late President in the official seal of the Association.

On motion of Dr. Gunn, the Committee on Publication was instructed to issue a volume of Transactions, provided the amount of material on hand is sufficient to make a volume of the size of the present volume.

General votes of thanks were tendered to the officers and the chairman of the Committee on Arrangements for the admirable arrangements for the success of the meeting.

The President elect was inducted to the chair, and made a brief address of thanks.

THE TRUSTEES OF JEFFERSON MEDICAL COLLEGE have elected J. W. Holland, M.D., of Louisville, Kentucky, to the chair of Medical Chemistry, to succeed Prof. Mallet, resigned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MARCH 5, 1885.

(Continued from page 516.)

The President, B. F. BAER, M.D., in the chair.

THE PRESIDENT presented a'

GANGRENOUS FIBROID TUMOR OF THE UTERUS.

Mrs. J., a patient of Dr. Ira D. Canfield, of Renovo, Pennsylvania, 52 years of age, married, had borne one child eighteen years ago; she had not been pregnant since. Her abdomen had been rather prominent for years, and about five years ago she discovered that it was becoming quite firm and hard over the lower protuberant portion. About the same time her menses began to appear more frequently than usual and to continue longer, until during the last year she flooded continuously three weeks out of every four. She thought she sometimes lost a quart of blood in twenty-four hours. There was great tenderness over the abdomen, so that the weight of the clothing was intolerable, a constant feeling of painful distention, and sometimes a sensation of bursting. These symptoms increased in severity, and in the latter part of January, 1885, labor-like pains supervened. Paroxysms of uterine tenesmus occurred several times a day, resulting finally in a discharge of serous fluid and gas, which must have been considerable in quantity, for the next morning there was marked subsidence of the previously distended abdomen.

However, the large, dense, round, and evidently uterine tumor still remained, tolerating, now, comparatively rough manipulation, the tenderness having almost entirely disappeared. The quasi labor-pains increased in frequency and strength, and shreddy, putrid masses were occasionally expelled from the vagina. The patient began to show evidences of acute septicæmia. Dr. R. Armstrong, of Lock Haven, was now called in consultation, when it was determined that nature was endeavoring to cast off a decomposing uterine fibroid and an effort was made to assist. Symptoms of blood-poisoning became alarming.

On February 15 he was suddenly summoned, and, with the patient anæsthetized, they found the following condition: Abdomen distended and tympanitic; a globular and symmetrical mass outlined within the lower portion of the abdomen, extending two inches above the umbilicus, about the size and consistence of the pregnant uterus at the seventh month of gestation. Hanging from the vaginal orifice was an elongated mass of toneless, decomposing tissue, resembling a mass of amniotic membrane which had been allowed to remain in the parturient canal for several days after labor. It had a purplish, ashy color, and was as thick as his forearm. The odor emitted was sickening. Passing his hand beside this mass, which could not be easily separated, he found the os uteri so dilated that the vaginal and cervical canals were almost of the same calibre and the rim of the os could scarcely be defined. Advancing the hand within the cavity of the uterus, it passed among an immense quantity of semi-friable, soft, and shreddy tissue, and he further discovered several large tumors of firm consistence embedded in and apparently one with the uterine wall. Indeed, it was difficult to define the uterine wall, so irregular and thick was it at some points and so thin at others. The tissues at the attenuated portions—the uterine wall proper—appeared so weak that he feared that the manipulations necessary to enucleate the tumor would make rupture of the uterus imminent. But their immediate removal was imperative, and fortunately their attachments were softened by the process of degeneration which had caused the grave symptoms. He therefore introduced Thomas's spoon-saw, and with that and his fingers separated and removed section after section until there was nothing left of the uterus but the merest shell. The aggregated quantity removed, a portion of which was presented this evening, almost half filled a wooden bucket. The uterus did not contract well after the operation, and very free hemorrhage occurred, but it was controlled and the uterus made to contract by large and repeated injections of pure vinegar.

The after-treatment was carefully and judiciously conducted by Dr. Canfield, and consisted of injections into the uterine cavity of vinegar twice daily until all fetid discharges had ceased. The improvement in the temperature and pulse of the patient was remarkable, and within a few days she expressed herself as feeling better than she had felt for years. She is now sitting up, apparently restored to health.

Dr. HARRIS inquired the cause of the gangrenous change in the structure. Was it confined to the new tissue?

Dr. GOODELL thought that the process of auto-enucleation was the cause of the degeneration of the tumor. The latter is a low grade of formation, and the contractions of the uterus and the constriction caused by the cervix uteri around the already extruded portion interfered with the circulation in the tumor and caused its death. In one case he removed a tumor in which this process had just commenced. The removal of the tumor was followed by a gush of nearly half a pint of broken-down blood, which was very offensive in odor. A sharp attack of erysipelas followed.

Dr. BAER could give no other reason than that advanced by Dr. Goodell. The tumor was of slow growth. No ergot was given, but labor-like pains supervened and may have cut off the circulation. The degeneration was apparently confined to the new growth.

REVIEWS AND BOOK NOTICES.

THE MEDICAL DIRECTORY OF PHILADELPHIA, PENNSYLVANIA, DELAWARE, AND THE SOUTHERN HALF OF NEW JERSEY, 1885. Philadelphia, P. Blakiston, Son & Co. 8vo, flexible morocco cover. Pp. 397. Price, $2.00; after May 1, $2.50.

This handsome volume presents, in acceptable form, an alphabetical and street directory of physicians practising in Philadelphia, with the date and place of graduation; also the addresses of those of the State, as well as of Delaware and of the adjoining portion of New Jersey. Much useful information is also furnished regarding national and local medical societies, hospitals, and institutions of various kinds, which is often needed for reference. Lists of dentists, veterinarians, druggists, instrument-makers, electricians, and opticians are also supplied.

Never before has the profession of this locality been so well served in the way of a directory, and it is to be hoped that the enterprise of the publishers will be appreciated and sustained. Very few corrections are noted in looking over its pages, and the only change we would suggest in the arrangement would be to place the directory in the front of the book and to put all the other accessory matter in an appendix.

GLEANINGS FROM EXCHANGES.

ENLARGED PROSTATE AND RETENTION OF URINE.—In a paper on "Tenotomy of the Levator Prostatæ," Dr. Hal C. Wyman makes a pertinent suggestion in the treatment of enlargement of the prostate gland, which so frequently requires catheterization, with the risk of catheter fever and death. He concludes:

1. The tendon of the levator ani muscle unites with the central tendon of the perineum, and invests the prostate gland in such a manner that when the prostate is enlarged force is brought to bear upon it during efforts to evacuate the bladder, which rotates the prostate upon the urethra and shuts off the flow of urine.

2. A section of the perineum and its deep fascia and central tendon will remove the force expended by the levator ani muscle in producing version of the prostate, and permit the muscles of the abdomen and bladder to evacuate the urine. Such a section implies tenotomy of what some anatomists call the *levator prostatæ* muscle.

3. An operation of this character involves a breaking up of the veins and lymph-spaces on the rectal and lateral aspect of the prostate, and, if the wound is made to granulate from the bottom, atrophy of the prostate will follow, so that by the time the tendon levator prostatæ has reunited no further difficulty in micturition will be likely to ensue.

LAPAROTOMY FOR TRAUMATIC ANEURISM OF THE ABDOMINAL AORTA.—Prof. Loreta, of Bologna, operated, on December 18, upon a sailor, who was suffering from an abdominal aneurism caused by a blow. An incision was made from the ensiform cartilage to the umbilicus, the aneurism exposed, and its cavity filled up with two metres of silver-plated copper wire. Twenty days later no trace of pulsation remained in the sac. On March 9 the patient had quite recovered, and was able to resume his duties.—*British Medical Journal*, March 28, 1885.

RINGWORM TREATED BY CHRYSAROBIN IN LIQUOR GUTTA-PERCHÆ.—In a note upon the treatment of an epidemic of ringworm of the scalp in a public institution, Dr. W. T. Alexander recommends epilation and the use of a ten-per-cent. solution of chrysarobin in liquor gutta-perchæ, which forms a pellicle upon the surface, preventing the further extension of the disease. This treatment was very successful.—*Journal of Cutaneous and Venereal Diseases*, February, 1885.

THE ANNUAL CONVERSAZIONE OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, held on the 16th ult., was largely attended, over five hundred guests having accepted the invitation, including a number of distinguished physicians from other cities. In the library Drs. S. Weir Mitchell and E. T. Reichert showed specimens of snake-poison and its effects, while Drs. Shakespeare, Formad, and J. Gibbons Hunt exhibited apparatus for culture of bacteria and various microscopic slides of interest. In the lecture-hall Dr. Formad and Mr. Holman exhibited the lantern microscope. A supper concluded the evening's exercises.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 12, 1885, *TO APRIL* 25, 1885.

MCPARLIN, T. A., LIEUTENANT-COLONEL AND ASSISTANT MEDICAL PURVEYOR U.S. ARMY.—Sick-leave extended three months, on surgeon's certificate of disability. S. O. 88, A. G. O., April 17, 1885.

LIEUTENANT-COLONEL JOS. R. SMITH, SURGEON; MAJOR JNO. S. BILLINGS, SURGEON; MAJOR HENRY MCELDERRY, SURGEON.—Detailed to represent Medical Department of the Army at annual meeting of American Medical Association to be held at New Orleans, Louisiana, April 28, 1885. S. O. 91, A. G. O., April 21, 1885.

BROWN, HARVEY E., MAJOR AND SURGEON.—Leave of absence extended two months. S. O. 83, A. G. O., April 11, 1885.

CAPTAIN L. W. CRAMPTON, ASSISTANT-SURGEON.—Assigned to duty as post-surgeon, Fort Bridger, Wyoming Territory.

FIRST-LIEUTENANT WM. C. BORDEN, ASSISTANT-SURGEON.—Ordered for duty at Fort Douglas, Utah Territory. S. O. 33, Department of the Platte, April 22, 1885.

ROBERTSON, R. L., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 43, Department of Texas, April 16, 1885.

PHILADELPHIA, MAY 16, 1885.

ORIGINAL COMMUNICATIONS.

ABSTRACT OF A PAPER ON THREE CASES OF IDIOPATHIC ANÆMIA, WITH REMARKS; AND AN ANALYSIS OF THE CASES HITHERTO PUBLISHED IN AMERICA.

Read before the Philadelphia County Medical Society

BY J. H. MUSSER, M.D.,

Chief of the Medical Dispensary, Hospital University of Pennsylvania, Pathologist to Presbyterian Hospital, etc.

THE object of the writer of this paper was to place on record three new cases of idiopathic anæmia, and to gather up the cases previously published in America, for analysis and ready reference. The first case recorded was a female, married, æt. 42, who died from an anæmia which developed without organic cause, the inception of which was probably influenced by shock. The usual symptoms of profound anæmia were present, with the special characteristics of retinal hemorrhages, irregular fever, maintenance of adipose tissue, and the usual change in the blood. The red cells were reduced to 715,000 per c.mm. Cerebral symptoms were marked the last week of the illness. Duration, about three years. The autopsy did not reveal any organic disease to account for the anæmia. The bone-marrow was healthy, and the sympathetic ganglia, on microscopical examination, were found normal. A special feature of the case was the chemical examination of the blood. (See remarks.)

The second case was a man, æt. 41, who had been exposed to severe weather as a lumberman, and had had considerable mental anxiety. Clinically, it was at first difficult to distinguish the case from cancer of the stomach. The anæmic symptoms were marked; the red cells reduced to 2,210,000. The patient improved; suffered a relapse the succeeding spring, the red cells falling to 1,000,000 per c.mm., to recover permanently. No enlargement of lymphatics, liver, or spleen was discovered.

The third case was also a male, æt. 44, who improved, after a relapse, under treatment. No cytogenic organs appeared to be diseased. The anæmia developed without assignable cause. Intemperance might have been causal. Three counts of the blood showed a reduction of red cells, as follows: first count, 570,000 red cells per c.mm.; second, 660,000; third, 1,600,000 per c.mm. Some cells were larger than normal; microcytes were abundant; irregularly-shaped cells were the rule.

In his remarks Dr. Musser alluded to some special features of the cases:

1. Etiology. Influence of shock; age of the three patients (over forty); sex, two males and one female; absence of deprivation of food in all the cases.

2. Appearance of blood. Reduction in number and change in size and shape were marked; nucleated red corpuscles were not observed. The extreme reduction and very gradual increase in the Case No. III. were remarked upon.

3. Urine. A comparative table of the analysis of the urine in secondary anæmia, idiopathic anæmia, and chlorosis was presented. The percentage of urea was below normal in all the cases, and much less in the cases of secondary anæmia and chlorosis. Phosphoric acid and the chloride of sodium were reduced in amount in idiopathic anæmia. Uric acid was increased in one case, diminished in another.

4. The absence of pathological change in the sympathetic system of nerves, confirming the observations of Pye-Smith, Wilks, *et al.*

5. The absence of abnormal change in the bone-marrow.

6. The presence of black specks or possibly pigment-granules in the blood-clots, which were very soft.

7. The chemical examination of the blood. This is believed to be recorded for the first time. It was made by Dr. Marshall, of the University. The most striking feature was the reduction in the percentage of the iron: from 54 parts in 1000 (normal) to 18 parts. Albumen was lessened eleven parts in the thousand. The extractives and fats were increased, a possible source of light in studying the pathology of anæmia.

8. Course and termination. The relapse in one instance, with relief by removal from home, was noted; improvement decided in one case.

The second part of Dr. Musser's paper consisted of a *résumé* of the work of ob-

servers in America on idiopathic anæmia. He calls attention to the early observations of Channing (1842), and reviews the work of Howard, Pepper, Dale, Henry, and others.

Two tables were presented: one containing thirty cases of idiopathic anæmia in which the bone-marrow was normal or not examined; the other containing nine cases with marrow-lesion. A critical analysis of symptoms and pathological appearances was not attempted. The age, sex, occupation, habits, and exciting causes were reviewed. The writer pointed out the peculiarity that but one female of nine should have had marrow-change, and that all the affected males were over forty. Combining the tables, it is seen that the males exceeded the females (twenty-four to fifteen). Müller, Eichhorst, and Pye-Smith found the females to exceed the males in their analyses of cases. Regarding age, it was seen that the disease occurred in females earlier in life than in males, and that the disease was most frequent from the twentieth to the fiftieth year.

No sufficient cause was found in the study of the tables to warrant our regarding it as the source of the disease. Excessive physical labor and mental strain respectively were present in some cases. Nine of the males followed laborious occupations, while not a few were business men or clerks. Pregnancy was coincident in four cases only. Five of the patients were intemperate, four temperate. Privation had no influence; no instance was recorded. In fact, many of the cases were people of wealth. The family history did not reveal anything bearing on the etiology. The writer's case and cases of Curtin, Pepper, and Osler were probably due to nervous shock. Diarrhœa was the only disease found that might be causal; it was recorded in three instances, in all of which marrow-lesions were found.

The writer pointed out the locality of the disease, or at least that in which it was observed. It was found that fifteen of the cases were observed in Philadelphia, thirteen in Canada, and eight in Boston. He believed it due to special attention paid to blood-examinations in the respective places; it calculating to make the profession alive to the presence of this rare disease.

PARALDEHYDE AS A SLEEP-PRODUCER IN THE TREATMENT OF THE INSANE.

BY H. C. HARRIS, M.D.,

Assistant Physician State Hospital for the Insane at Norristown, Pa.

AS the production of sleep is often a chief factor in the treatment of the insane, I am prompted to offer the result in one hundred and fifty-two cases of mental disease in which sleep was induced by a recent hypnotic which is now attracting much attention. When paraldehyde is given to man in moderate dose (fifty minims), the most marked result, in the majority of instances, is a quiet sleep of from two to seven hours, which is induced in ten to forty-five minutes after its absorption.

Its advantages over chloral in our experience are mainly that there is no danger from its action on the heart; in fact, one hundred minims have been given to cases of acute mania without the slightest noticeable effect upon the heart or respirations, the repose simulating closely natural sleep, the subject being easily aroused but soon dropping off again when let alone. No convulsive effect or dreamy stimulation of the mind has been observed, its first effect being apparently upon the cerebral hemispheres. Never have we seen the awakening accompanied by any unpleasant symptoms; in fact, there is no objection on this score save the disagreeable odor of the breath, which is perceptible for from twelve to seventeen hours after the exhibition of the drug.

In cases of melancholia paraldehyde has acted commendably; even in patients who would sit for hours deploring their unhappy lot, and whose brains were filled with fears of an overwhelming calamity, a dose of sixty minims of the drug has calmed them into a quiet and apparently dreamless, refreshing sleep. In several instances, however, we found it necessary to increase the dose to seventy-five minims, but this amount uniformly brought on a most gratifying rest.

In those cases where paraldehyde is required to be given for a length of time, a certain tolerance would be expected, but the observations lead us to believe that the tolerance of paraldehyde does not manifest itself sooner than other hypnotics, and whether the increased dose was needful on account of a slight aggravation of the dis-

ease, or a tolerance of the drug, as yet we are unable to say: in all probability both have taken a part.

As an anodyne (in a limited number of trials) the remedy has failed either to relieve pain or produce sleep, although seventy-five minims of the drug have been taken; in no case, however, was nausea excited.

The following table will show the types of insanity that embrace the 152 cases to whom 1518 doses of the drug were given:

Mania, acute, 38; chronic, 9; periodic, 5; epileptic, 2; general paresis, 16; dementia, acute, 1; terminal, 11; organic, 19; senile, 4; epileptic, 2; melancholia, acute, 28; chronic, 11; hypochondriasis, 1; imbecility, 3; opium-mania, 1; dipsomania, 1.

Our results having been so uniformly satisfactory, we consider that paraldehyde is a valuable addition to our list of hypnotics; and where a sleep-producer must be given for a length of time, we consider it a most efficient, safe, and reliable remedy, the *sleep produced being in proportion to the size of the dose administered.*

NOTES OF HOSPITAL PRACTICE.

NEW YORK HOSPITAL.

SERVICE OF L. D. BULKLEY, M.D.

PALMAR SYPHILIDE.

GENTLEMEN,—I show you this case to-day that you may know how difficult it is sometimes to make a diagnosis.

The patient, aged 38 years, is a bill-poster by occupation. He has an eruption on the palmar surface of the hand, which is of a dry and hard character, marked by fissures, so that it causes great pain in opening his hand. The first question I will ask him is if the disease is common to his trade. He says that there are about one hundred bill-posters in the city; that he knows them all, and that none are similarly affected. We therefore exclude the occupation. You know that we have in washerwomen a condition known as washerwoman's itch, in bakers, baker's itch, and in bricklayers, bricklayer's itch, and so on. About three years ago he noticed the eruption when he arrived in London, having sailed from New York as a steerage passenger, so that all local causes can be excluded. The eruption first made its appearance between the fingers. He had had boils previous to this, which, however, had disappeared. When the disease made its appearance first it was in the form of cracks and fissures, and not as lumps. As one crack healed up another one formed. The eruption had a crescentic border, and healed in the centre, spreading towards the circumference. The disease extended in the same manner on the wrist by a distinct red margin, and consisted of a dry, hard mass. The other palm is healthy.

Last week I told you that there were three diseases of the palm,—eczema, psoriasis, and syphilis. We also may have tylosis, but this disease is seldom found on the hands. I also told you that psoriasis confined solely to the hands was very uncommon, and I doubted its existence. There are some points of resemblance to an ordinary psoriasis. I here show you some plates by Wilson, but I question very much the diagnosis. In this case it is comparatively easy to exclude psoriasis, because the eruption is not found on the other palm (psoriasis being a symmetrical disease), nor does it exist on any other portion of the body.

We can now narrow the diagnosis down to eczema or syphilis. We must recognize the fact that both diseases may exist in the same person at the same time. Thus we may have a syphilitic ulcer of the leg and an eczema of the hand existing in the same patient. In favor of the case being one of eczema, we have thickening and redness of the diseased patch on the hand. We also have a patch of eruption existing on the forearm. In favor of its being syphilis we find a well-defined margin to the eruption, and the fact of its starting from small points, healing up in the centre at various points, and spreading peripherally. He says that the disease has never been worse than it is now; sometimes it is very nearly well; still, the hand has not been free from fissures and cracks for a longer period than a week during the past three years.

He has been to several physicians, none of whom have apparently succeeded in curing him. Success in treatment will depend, in a great measure, on a correct diagnosis; if the case be one of syphilis pure and simple, it will be well before long; if eczema, it will be more difficult

to cure; and if both diseases are combined, it will be much easier to treat.

The great duration and obstinacy of the disease, and the papulo-tubercular condition of the lesion, would be in favor of syphilis; but I hold that the condition seen is due to a certain extent to the coexistence of an eczema. In eczema pure and simple we do not, as a rule, have a margin so sharply defined and healing in the centre. The rule is that eczema heals at the edges first, while syphilis takes on healthy action in the centre of a diseased patch and spreads at the edges. In this case the disease is again travelling over the healed surfaces. About the features of eczema, we do not have just this kind of palm presenting itself, we do not get so many scattered, isolated healthy spots, nor would the sweat-glands be normal in the centre, as in this case, although there is an eczematous element present here, as shown by a patch of eczema existing on the forearm.

A peculiar feature of the late syphilide is the tendency to attack but one side of the body, whereas in early syphilis (first, second, or third years) both palms would be affected.

We have not yet asked the patient if he has had chancre, for even if he acknowledged this it would not be sufficient to prove that the present lesion is the result of syphilis; he may have barber's itch or any skin-lesion existing at the same time.

He says that he had a chancre in 1870; it felt hard, but did not ulcerate or discharge pus to any extent. There was no bubo present. As soon as the chancre healed, his throat became sore. He now has a sore, presenting the appearance of a mucous patch, on the right side of the throat at the junction of the upper and lower jaws. There are mucous patches also on the under surface of the tongue. He does not smoke nor chew. The reason I ask this question is because we may get pearly patches on the tongue of those who use tobacco, and not have syphilis. He has never had rheumatism. His hair fell out to a slight extent. He had a dark-colored eruption, five or six years ago, confined chiefly to the chest. This rubbed off, or was washed off, and probably was tinea versicolor. Because the man had an eruption it does not necessarily follow that it was syphilitic in its origin. Still, this need not militate against the eruption on the palm being syphilitic. Another argument in favor of its being syphilitic is that there has been no local cause of irritation, its persistence under treatment, the tubercular character of the lesion, the loss of elasticity of the parts, and the existence of cracks.

This, then, is a case of syphilis of the palm in which eczema has been superadded. If we regard it simply as syphilis and carry the treatment to a certain point, without curing it, and then doubt the diagnosis and treat it as a case of eczema, the disease will become worse. The question has been asked me if the same rule as to diagnosis applies to the soles of the feet as to the palms of the hands. It does, except as to tylosis, which we often find existing there when the patient is otherwise in perfect health.

I will put the patient on syphilitic treatment, and by that I mean the mixed treatment of bichloride of mercury and iodide of potassium. At the end of a certain time the treatment will be interrupted for one week each month, after that two weeks, and then every other month until he has been under treatment for at least two years, including the intermissions. During these intervals treatment directed towards the eczema may be given, such as acetate of potassium, Fowler's solution, etc., and we should continue these medicines although the eczema may have disappeared. The local treatment may consist of anything which keeps the skin soft. This would also be the treatment in psoriasis or syphilis. Every time he washes his hands I would have him apply Squire's solution of the glycerole of the subacetate of lead, diluted with five or six times as much glycerin. I even have patients wash their hands frequently for the purpose of applying the wash. At night the local treatment should be specific, and some preparation of mercury may be used, as a five or ten per cent. solution of the oleate, and if there is much pain, morphine may be added. The hands should be covered with rubber gloves. The ordinary blue ointment, diluted two or three times, may be used. Sulphur has been recommended, but it should not be employed until after the subsidence of the inflammation.

ACNE INDURATA.

The patient, 18 years old, presents a good type of the various forms of acne.

The hard, indurated, and inflamed masses seen are called acne indurata; the scarring seen on the skin is due to the marks of the acne. You will see that he has a thick, doughy, and greasy skin. You can see here the different forms of the disease, acne simplex being the small points of eruption; the punctata form, or comedones, are the black spots, and the red inflamed masses acne indurata. If the skin were a little more greasy we would have the form called acne oleosa. The bowels are regular, digestion poor, as evinced by restlessness at night. I believe that there is more or less disorder of the chylopoietic viscera (not necessarily amounting to disease), and that the oxalates would be found to be increased in the urine.

All these indurated masses should be opened by means of a lancet; the point of the lance should be guarded with an arm, so that we may not go too deep in puncturing the pustules and tubercles. In puncturing these masses they will bleed very freely at first, but it will soon stop, and the inflammation will subside in a very short time. There is another form of local treatment applicable in this case for the removal of the comedones. This is done by means of a metallic tube, about one-eighth of an inch in diameter at one end and one-thirty-second of an inch at the other extremity, which should be round, so that it will cut the surface of the skin. As this instrument is pressed down over the mouth of the sac, sebaceous matter enters the tube in the shape of a worm, but of course it is not a worm. These points of eruption will return, but by emptying them they are relieved of congestion and are enabled to take on healthy action. Then there is another instrument called the dermal curette used in acne simplex, by means of which the tops of the pustules are removed, relieving the congestion without injuring the healthy tissue. There will be slight bleeding and inflammation from this operation, but it will soon pass away. As a local stimulant, the following is of service:

℞ Potass. sulphuret.,
Zinc. sulphat., āā ʒi;
Aq. rosæ, fʒiv.

Mix the sulphuret of potassium with one-half the quantity of rose-water, and the same with the sulphate of zinc, mixing them together afterwards. The powder should be allowed to remain, as that is the only valuable thing in it.

Internally acetate of potassium or strong nitric acid, together with exercise and a well-regulated diet, are of service.

TRANSLATIONS.

Lepra-Bacilli.—Dr. Paul Guttman, in a paper read before the Berlin Medical Society (*Berliner Klin. Woch.*, No. 6, 1885), presented the report of a case of leprosy occurring in a girl 12½ years of age, in which were found in the tumors and in the blood abundant bacilli, which the author considered as the efficient cause of the disease. The detection of these bacilli in the new growth is said to be very easy; the specimens do not even need staining; they attain a length of one-fourth to one-half, and occasionally three-fourths, of the diameter of a red blood-corpuscle, and most of them contain spores. The curious fact was observed that the leprosy-bacilli possess the power of spontaneous motion, like the putrefactive bacteria of urine, after taking a section from the surface of the body, and may continue for an hour. This is checked by various staining solutions. The behavior to staining media, as pointed out by Koch, is identical with the tubercle-bacillus, which it also closely resembles in the dry specimens under the microscope, although it may be distinguished from the latter by the fact that it is always accompanied by cells from the affected area, and these cells contain bacilli; this could not occur in dry preparations from phthisical sputum, in which the bacilli are always free; in sections from tuberculous tissues, however, the tubercle-bacilli are also seen in the interior of cells, especially in giant-cells.

As regards the character of the disease and location, the new growth has its seat in the corium, and it is made up of more or less rounded or oval cells, differing greatly in size; many are only the size of a white blood-corpuscle, but some are three or four times this size. These cells are crowded together with very little connective, which is structureless, or here and there shows a tendency to become striped. Not only in the corium are these cells to be found, but they extend into the neigh-

boring subcutaneous tissues, and in the blood taken from remote portions of the body. The bacillary infiltration begins in the upper layer of the derma, the rete Malpighii remaining almost entirely free, and as a rule the sweat-glands also escape; the hair-bulbs and the epidermis are always free. The author concludes by expressing his belief that these bacilli are the efficient cause of the disease, for in all cases in which the dermal tumors and the leprous products of internal organs have been carefully examined this form of bacilli was detected, and always in large numbers.

Chronic Pneumonia, Phthisis, and Miliary Tuberculosis.—In an interesting article contributed to *Virchow's Archiv* (B. 98, H. 1), by Drs. Biedert and Sigel, the evidence is reviewed in favor of the view, already expressed by others, that ordinary pulmonary phthisis is not a primary mycotic process, but that it is dependent for its development upon a preliminary, non-specific, chronic inflammatory infiltration of the lung-tissue. It is this exudation which affords the possibility of colonization and propagation to the ubiquitous tubercle-bacillus, which is suspended in the inspired air, and is not capable of development in the normal lungs of healthy individuals; by this means the non-specific pulmonary affection becomes developed into the serious and eventful processes of characteristic tuberculous pulmonary phthisis. A critique upon this article appears in the *Berliner Klinisch. Wochenschrift* (No. 6), in which the methods of examination adopted by Drs. Biedert and Sigel are pronounced unsatisfactory, and the view of the dependence of miliary tubercle and caseous pneumonia upon the introduction of the tubercle-bacillus is strongly affirmed.

Poisoning by Phenic Acid.—A prisoner, 32 years of age, drank an alcoholic solution of carbolic acid from a bottle which he thought contained brandy: the amount swallowed was about sixty grammes, equal to forty-eight grammes of phenic acid. As soon as he had swallowed the solution he gave a cry, ran a short distance, and fell comatose, with stertorous respiration and imperceptible pulse, and died in a state of collapse, without vomiting and without convulsions, in less than ten minutes after swallowing the poison. Cases of poisoning of this kind are infrequent, considering the constant use of carbolic acid, and such rapidly fatal accidents are remarkably rare.—*Le Progrès Médical.*

[A case has just been reported in the daily papers of suicide by swallowing carbolic acid, in a lady of high social position in Chicago, the act being caused by domestic trouble.—Ed. P. M. T.]

Treatment of Hordeolum.—Obadie and Darier believe that they have found a special micrococcus in the discharge from a stye,—thus accounting for the well-known tendency for that affection to return. In the treatment emollient compresses, poultices, or, what is better, cotton wadding dipped in a solution of corrosive sublimate (1-3000) or of boric acid (10 G.) dissolved in water (300 G.), preventing evaporation by a dry wadding or silk covering. The little abscess may require opening with a bistoury, and the eye should still be washed for some days with the boric acid to prevent relapses.

Danger of Blistering for Pneumonia.—Two cases are reported by a correspondent of the *Bulletin Général de Thérapeutique*, Dr. Dejean, in which a blister applied to the chest before the arrival of the physician was rapidly followed by congestion of both lungs, pulmonary œdema, and death in a few hours. Both patients, a man and a woman, were in the first stage of pneumonia. A strong protest is made against the abuse of blisters, and especially by the laity.

For Chronic Bronchial Catarrh with Emphysema and Dilatation.—

℞ Potassii iodidi,	2.	Gm.
Ammonii chlorid.,	50.	
Pulv. ipecacuanhæ co.,	2.	
Tr. eucalypti,	10.	
Elixir,	170.	M.

S. A dessertspoonful four to six times daily. This is also useful during paroxysms of asthma.—*Le Progrès Médical.*

Prof. Fordyce Barker, of New York, who in a few days sails for Europe, was tendered a reception by Dr. Benjamin Lee, of Philadelphia, on Thursday, 7th instant, in this city, at which a large number of representative medical men were present.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 16, 1885.

EDITORIAL.

THE AMERICAN MEDICAL ASSOCIATION AND THE COMMITTEE ON THE INTERNATIONAL MEDICAL CONGRESS.

IT is a matter of record that the American Medical Association, at a large and representative meeting held in Washington last year, decided to extend an invitation on behalf of the medical profession of this country to the International Medical Congress to hold its next meeting in Washington in 1887, and a committee was appointed, which included the retiring president and his immediate successor, and other prominent members of the Association, to convey the invitation; in case this was accepted, the committee was endowed with full authority to make the necessary arrangements, to solicit funds, to add to its membership, and to perfect its organization as an Executive Committee.

With regard to the *personnel* of the committee no criticism has been offered, but the official acts of the Executive Committee have been called in question. This Commission, in selecting men to fill the various offices, it has been asserted have not used sufficient discretion, but have favored unduly some localities, and have unfortunately ignored the claims of many representative men in the profession in other parts of the country. This, however, was to be expected, as there were not enough positions to go around so as to give one to each; and possibly the committee may have made some errors of judgment, which also might have been expected. Under these circumstances the American Medical Association has just appointed an additional supplementary committee of thirty-eight to supervise and correct the work of the first, and to act in conjunction with it in making all the arrangements for the International Medical Congress.

We think that the American Medical Association, owing to circumstances alluded to in our last issue, has by this action stultified itself, and has betrayed an inherent weakness in its present plan of organization.

The meeting at New Orleans was competent to take the work out of the hands of the original committee, according to law and usage, only by discharging the committee from further consideration of the same; it was not competent to appoint a committee to perform work which had already been placed in the hands of another one. It is probable, therefore, at the next meeting of the Association, that the Chair will rule upon this point that its action was illegal and void.

Furthermore, there has been organized, with the full sanction of the American Medical Association, an Executive Committee to make arrangements for the next meeting of the International Medical Congress. Having given its endorsement to the committee and authorized it, as far as lay in its power, to act for the profession of the United States, the American Medical Association has done all that it could or should do. It certainly has no supervisory power over the labors of the Executive Committee of the Congress, which is an entirely independent organization. The committee appointed to extend the official invitation to the Congress and to organize an Executive Committee reported both duties successfully accomplished. The Association should have accepted the report and discharged the committee. It is very much to be regretted that other counsels prevailed, and, owing to injudicious advice, another course was taken.

We do not anticipate that the Executive Committee will be at all hampered

in its arduous labors of preparing for what promises to be the greatest medical convocation ever held in this country. Nor do we believe that the success of the Congress or the future of the Association is seriously imperilled by the unfortunate incident of the meeting at New Orleans. But we regret sincerely that the Association, in voting upon such an important question as this, did not call for the ayes and nays, or take some other means of ascertaining how many of those voting were delegates and entitled to vote. As pointed out in our New Orleans correspondence, the voting was carried on in such an irregular and loose manner that it was impossible to decide whether the resolution received a majority of the legal votes cast or not. It would prevent much confusion if during business meetings only those entitled to vote should be admitted to the floor. We respectfully commend this to the attention of the Committee on Arrangements for the meeting next year at St. Louis.

VIRCHOW AND HIS ARCHIV.

IT is not too much to say that no publication has had such an influence in the promotion of modern medicine as the *Archiv für pathologische Anatomie und Physiologie und für klinische Medicin.* Were all other journals and books of the century to perish, we could gather from its pages the history of most of the important discoveries which have marked the progress of scientific medicine. The occasion of the publication of the one hundredth volume is taken by the editor to review briefly the history of the undertaking. And what a retrospect is his! Eight-and-thirty years have passed since the young and almost unknown Prosector at the Charité sought to establish a journal suitable as a medium for the pathological and clinical contributions of the more advanced workers in North Germany. The difficulties were great, but with the co-operation of his friend Reinhardt and the substantial encouragement afforded by the publisher Reimer, the trials of the first few years were successfully overcome. We can well understand that those of the profession in authority looked askance at the ardent young pathologist whose efforts as a reformer were directed to abuses of all sorts, and whose other journal, *Medicinische Reform,* was an organ of the most advanced radicalism and full of stinging articles against the government. But with the issue of each number, friends and contributors increased and the *Archiv* gradually grew in size and reputation.

At first only one volume a year—not always that—was published; but in 1856 the amount of manuscript justified the printing of three volumes, and from 1864 the journal became a monthly one, with three volumes a year, and in 1879 the numbers were enlarged so that four volumes a year were issued, at which number the editor hopes it will remain. The retrospect is in many ways a painful one, for Virchow is reminded of those who had worked with him and who are now no more: Förster, Friedrich, Weber, Bühl, Hüter, Cohnheim, and others,—many of them his pupils and intimate friends.

To no man is it given to see the fulfilment of all his hopes, and to but few is it given to realize so fully their early expectations as Virchow has done. In Nos. 3 and 4 of *Medicinische Reform* Virchow mourned the non-existence of a Berlin school of medicine, and throughout his early writings there can be traced an earnest desire for the development of the profession of that city. In his own life and work we can see the fulfilment of these youthful hopes, for the reputation of the Berlin school centres in him and his scholars.

With his early political aspirations we have naught to do. The fulfilment has not come in the way he wished; but since the affair of March, 1848, he has fought incessantly another battle of reform, feel-

ing that the questions of daily bread and a healthy existence come first in the life of a people, and his efforts in this direction, as in so many others, have been crowned with success. With eyes undimmed and vigor unabated he continues to labor, and that he may long be spared to do so is the earnest wish of his professional brethren in this country.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

THE French Surgical Congress. — The principal event of the past week has been the opening of the first session of the French Surgical Congress. The idea of holding an annual congress was first proposed by Prof. Demons, of the Bordeaux faculty, to the Société de Chirurgie.

At the first sitting it was decided that they would meet yearly in Paris, and as the time chosen conflicts with the meeting of the German congress, it was voted that future meetings would take place in the latter part of October.

Professor Trélat was elected President, Dr. Ollier Vice-President, and Dr. S. Pozzi Secretary and Treasurer.

The sittings have been largely attended by a great many of the most distinguished Continental surgeons, and a very large number of interesting papers were presented. A fifteen-minute rule being enforced, everybody had to keep to the point. A list of the articles would almost take up the limits of our letter, so we must content ourselves with a rapid *résumé* of the most important of them.

Pathogeny of Suppuration.—Dr. Socin, of Basle, Switzerland, read a remarkable article on this subject. He said that all are agreed that suppuration is an accident in wounds, and that it is the first and most important of all complications, for a wound that does not suppurate is out of danger as regards most of the infectious troubles. Several years ago M. Pasteur found in five cases of furuncle and in the pus of an osteomyelitis a micro-organism forming little spherical points, often seen in small bunches. The method of culture in gelatin or in solidified blood-serum invented by Koch has given a new indication and impulse to our studies of these pyogenic microbes, of which several have been described by different authors. He had made some experiments with his assistant, Dr. Garri. First, as to osteomyelitis, he had found, as Rosenbach and Krause did, both the yellow and white form of the microbe in pus, and he also succeeded in finding them in the blood. In six tubes of blood only one remained sterile; in the five others he found a mixture of both kinds. In a series of thirty trials both were found, the "Staphylococcus pyogenus albus," or white, and the "aureus," or yellow variety. So he felt that it could not be doubted that they played a very important *rôle* in the etiology of suppuration.

They afterwards found the same parasite in a large number of abscesses, furuncles, phlegmons, whitlows, etc. In seventy-six cases the yellow parasite was found no less than sixty-eight times; in the other eight cases they found the streptococcus. These were very serious cases, and death followed by septicæmia. This fact would seem to bear out the assertion of Rosenbach, who said that the streptococcus belongs to the very malignant forms of disease. They concluded that osteomyelitis had no specific cause proper to itself, but that it had, in common with various acute abscesses, phlegmons, whitlow, etc., the same forms of micro-parasites that produced them. Dr. Garri was not satisfied with theory and the proofs they got by microscopical examination with artificial culture, so he experimented on himself. He first inoculated his left third (ring) finger with a small quantity of the microbes from the blood of a patient having osteomyelitis, and in twenty-four hours he had an abscess that went all around the nail. The re-inoculation of this pus on gelatin gave a culture of the yellow pus-microbe. He then took an entire tube of this microbe obtained directly from pus and inoculated himself again, this time on the arm and by inunction or friction only. In six hours the skin was red, swollen, and painful; the same evening some small pustules appeared, and the next day they were as large as a small pea. In spite of treatment, it went on for seven days with very alarming symptoms, swelling of the ganglions, etc.; taking on, in fact, the character of an immense anthrax. In short, it took three weeks to cure, and left the courageous experimenter with seventeen cicatrices to show how he had suffered in the cause of science.

From these facts they concluded that whitlow, furuncle, phlegmons, etc., are infectious affections due to the presence of pus-microbes; that they are just the same as those of osteomyelitis, and the experiment of their introduction by friction proves that the opening of the skin is not necessary. It is useless to insist on the practical importance of these observations to explain surgical cases that we see daily.

Tarsotomy in Old Cases of Club-Foot.—Dr. Gross, of Nancy, presented a paper on this subject. He gave first the various methods proposed for treatment of club-foot, and proceeded to show that tarsotomy was only lately

brought into favor. Since 1883 he had treated three confirmed cases of club-foot by this operation, which consisted in a general way of extirpation of the astragalus and resection of the anterior extremity of the calcaneum. The results obtained were good. The foot was brought to a right angle. Sometimes there was a slight deviation inwards, but this was easily corrected by wearing an apparatus for a while. The foot was made to rest squarely on the ground, bearing on the heel and the sole. This combination of the resection of the calcaneum as well as the extraction of the astragalus was much superior to the extirpation of the astragalus alone, so M. Gross strongly advised it, done of course with antisepsis. It had no risk for the patient, and restored the foot to its normal form, as the doctor showed with plaster models of his cases, both before and after the operations.

Operation of Cataract by Extraction.—The two prominent eye-surgeons, Dr. Panas and Dr. Galezowski, spoke on this subject. M. Panas said that ever since the invention of the method of extraction, eye-surgeons had oscillated between Daviel's operation and the operation recommended by Graefe, which was a modification of Daviel's. For two years, since we have all adopted the antiseptic method, the only objection that had been urged against Daviel's operation, which was its tendency to produce panophthalmitis, has disappeared, so that there is now a tendency to go back to the original operation instead of Graefe's, which had been universally adopted. Daviel's operation with the flaps, slightly modified, offers many advantages. In an æsthetic point of view there is no comparison between the two methods, as Graefe's operation sectioned the iris and Daviel's kept its normal shape intact. The issue of the vitreous is also less frequent, inflammation of the traumatised iris is less to be feared, and often the inflammatory process following the cataract, commencing by the inflammation of the cornea and going to the posterior chamber by the breach made in the iris, is avoided in the French method (Daviel's), as in it the iris, remaining intact, forms a wall that separates the cornea from the posterior parts. He thought also that the patients could see much better.

Alongside of these advantages there are but few disadvantages. With antisepsis, inflammation is not to be feared. But he stated that Daviel's operation is a more difficult one than Graefe's. Employing cocaine, however, will permit the surgeon to operate without pain mostly and allow one to take time. It had been said against Daviel's operation that there was danger of hernia of the iris, but this can easily be prevented by cutting the flaps longer.

Dr. Galezowski, who followed, said that he was one of the first to come back to the French method. To make it perfect, the principal modification needed is to change the corneal flap by making a flap of the cornea semi-elliptical in shape, and pushing back the iris with a stylet. By this means excellent results are obtained. As to the use of cocaine, he did not share the opinion of M. Panas, as he had noticed a persistence in the insensibility of the parts that lasted five or six days, and he thought that it favored the partial necrosis of the corneal tissue, and that it might prevent cicatrization and the primitive reunion of the wound of the cornea; so he did the operation without the use of cocaine.

Dr. Panas replied that, as regards the temporary insensibility, he believed it was due to the section of the nerves of the cornea, and not to the use of the anæsthetic.

Indications in Urine-Examination of Surgical Cases.—Prof. Verneuil spoke of a point in regard to examination of urine and the information it may give to surgeons. He would not say that the point was new, as it had preoccupied him since 1867, and he had studied it ever since. His conclusions are as follows:

1. The urine of patients operated upon or wounded often presents a rose-colored deposit, which has been called *acide rosacic.*

2. This phenomenon coincides with oliguresia and the usual concentration of urine seen after operations. It lasts three days, and is often not thought of.

3. It will appear after all sorts of wounds, both in weak and strong subjects, with or without anterior maladies, so that its signification and origin would seem to be uncertain; but it is now established that it is under the influence of some lesion of the liver, cirrhosis, congestion, hydatids, or cancer.

4. The hepatic alterations caused by alcohol seem to have the lead in causing these deposits.

5. These rose-deposits have a real value in diagnosis, as they announce a morbid state of an important viscus, and one that is often latent and difficult to recognize. It is also one that will exercise a very unhappy influence over the march and termination of the surgical lesions made.

6. The prognostic value is also great. It is true that it is not always followed by trouble; but it is well to know beforehand that patients having this rose-colored urine are exposed (in his opinion at least) to consecutive hemorrhages and gangrene.

7. To prevent as much as possible these complications, we must be assured of hæmostasis and antisepsis by using all the modern means for those purposes, and at the same time direct a proper medical treatment, not only before, but also during and after the operation.

M. Verneuil then gave at some length a number of observations to prove his statements.

Dr. Thiriar said that the examination of urine would give some very important indications to the surgeon. Before operation, in abdominal tumors, the determination of the quantity of urea can clear up a diagnosis if it is doubtful. In tumors of a malignant type the urea will go down below twelve grammes. The analysis should be made for several consecutive days, and the subject must be exempt from tuberculosis and albumen in the urine. We should also take into account the alimentation of the patient. After the operation the determination of the chlorides will help us most, for an exaggerated amount will denote that the inflammation is going to be more than normal, and that it will most likely take a destructive form. When the urinary chlorides fall, after an abdominal operation, below one gramme for twenty-four hours, there is danger of septic invasion of the peritoneum, even if nothing else shows it. This is a sure means of allowing us to interfere in time to do good.

Dr. Kermisson, who followed, speaking of the amount of urea in case of cancer, first of all called attention to the amount given in most books of the normal quantity of urea (thirty-two grammes). He did not think it was over eighteen to twenty grammes as a rule. He found that it was very uncertain in many people, so that the diminution which was spoken of by several authors in cases of cancer could not be held as a good sign in diagnosis. Grégoire found eighteen to twenty often in cases of cancer of the liver, and others have seen as much : so there are plenty of exceptions to the law of Romeler. He had found four grammes of urea in a woman who had cancer of the breast, and six in another case, but both were cured after an operation. Moreover, according to the theory of Romeler, in benign tumors the urea should remain normal, but he had found a great difference.

Artificial Anus.—Dr. Trélat said that when he commenced to defend the treatment of cancer of the rectum by a palliative method, he adopted the lumbar operation, and he had constantly operated from that side. It is possible, owing to certain perfections brought to the other operation on the iliac side, that that operation will be an improvement. He knew that the lumbar artificial anus is the most difficult to make, but he thought that it had introduced a real revolution in the therapeutics of cancer of the rectum. As to the future, he was willing to adopt the iliac operation as soon as sufficient statistics are given to show the relative gravity of the two operations.

Dressing of Wounds.—Dr. A. Guérin said that he wished to demonstrate the value of his dressing in transporting wounded patients. For twenty years he held that purulent infection and erysipelas were contagious and that they were transmissible by the air ; so he took to his system of filtration of the air. In 1870 he had said that these fermenting principles penetrated the wounds, and it was by filtering the air that he had succeeded first in preventing the entry of the destroying microbes and preserved the wounds from them. (This system is now adopted in all of the hospitals of Paris, antiseptic cotton wadding being applied to all wounds.)

He then proceeded to show how, with his dressing, patients could be transported even in wagons without springs. Those who have followed his hospital service have seen him press with all his weight on wounds without pain to the patient. It is well understood that immobilization is the rule, and one would be surprised how solid a part can be made with wadding and bandages. After forty-eight hours the bandages give way, and they must be renewed. He contended that his system is all that is needed to immobilize a part so that the patient can be transported. Dr. Guérin closed by hoping that his system would be tried by all, and in military surgery in particular.

Professor Verneuil on a New Method for Colotomy.—Prof. Verneuil said that he had adopted the inguinal method for colotomy and defended it for some years back ; but, after having tried it recently in some ten cases in which he had the patients followed for a long time afterwards, he was led to see some radical defects in the operation, which he could speak of more freely as he hoped he had found a means of remedying them. This he did by changing the operation without increasing its difficulties. The inguinal anus is established to ward off the fatal consequences of an obstruction, which may be congenital or acquired, complete or incomplete, having its seat on some point in the recto-anal passage. The operation is essentially palliative, and the opening may remain permanent or it can be obliterated afterwards according as the cause may be a permanent one or otherwise. The chances are that, once established, it will remain as long as the patient lives. This being so, the surgeon when he attempts this operation should so constitute the artificial anus that it will function well from the first day to the last. It seemed to him that we have not thought enough of the future in the operation of inguinal colotomy, particularly of the chances of a narrowing, which is so frequently produced. He had seen it contract, as it were, almost under his eyes : often the orifice has been reduced to ten millimetres in width. At first this surprised him. He had lived under the idea that wounds healing by first intention,

not presenting any granular layer or suppuration, could not contract under the skin; but the contrary had been proved. He looked for some explanation, and proceeded to give one. He spoke of the operation in the following terms:

"In the usual form of it, the iliac S is drawn to the edge of the abdominal opening and fixed at that point. It follows that the artificial anus has no spur or heel, or at least it continues above and below one straight line of intestine, so that anything coming from the stomachal end has as much tendency to fall into the rectal end as it has to come out at the opening. The segment then of the large intestine between the real anus and the newly-made one continues to receive fecal matter, that distends it, brings on tenesmus, with a strong desire for defecation by the constant irritation produced. This is made worse when the inevitable contraction of the artificial anus comes on. How does this narrowing occur? As follows: The incision is made in the abdominal walls parallel to the crural arch. It separates rather than divides the fibres of the aponeurosis and the fibres of the obliquus externus and internus with the transversalis, so that the button-hole style of opening made conducts to a peritoneal cavity that is serous on its inner walls; but the opening remains cutaneous on its outer walls, and it is fibro-muscular in the interstice. This being so, its lips have a natural tendency to draw together, and do so even during the operation, while the portion of the large intestine drawn out is flattened from above downwards by the contraction of the muscular fibres.

"If the opening would only remain soft and extensible, it then would not matter; but it becomes rigid, owing to the fact of a number of sutures that have to be placed around it to fix it to the belly and to prevent any possible inoculation of the wound or the peritoneum by the fecal matter. These sutures provoke an inflammation that extends to a zone of some three centimetres. It is true that this subsides under treatment in a few days, but the plastic tissue left behind obeys the law of cicatrization and retracts slowly but surely: like the cords of an old-style purse when drawn tightly by a careful owner, it narrows the opening until nothing is left. I have tried in vain to prevent this contraction by the introduction of all sorts of bodies that were more or less tolerated, but have had not one success.

"I think now I have found a means to fulfil the two most prominent indications, which are: (1) insure an easy passage of the matters as they come down from the stomachal end; (2) prevent them from going into the rectal end.

"The mode of operation that I propose differs so little in the living and the dead that any one may perform it on the cadaver. The region is carefully washed, and shaved (if needed), and a spray of some antiseptic liquid is afterwards kept going over it all the time of the operation. A line drawn from the spine of the pubis to the superior-anterior spine of the ilium indicates exactly the situation of the pubic arch. From the union of the external third of this line with its internal two-thirds a new line is drawn to the umbilicus, and on this last line I make an incision coming from above. It should be about four centimetres long (say one inch and three-quarters), and terminate on the Fallopian ligament. The bistoury, having divided the skin and the aponeurosis, can be laid aside for a pair of dissecting-forceps and scissors, with which the muscles and at last the peritoneum can be divided by small snips. Care must now be taken to place six hæmostatic pincers around the borders of the cut, so as to be sure later on that you have taken in the peritoneum. The opening will also be distended by them, and a few vessels found on the walls having been twisted, you will now look for the sigmoid flexure, which can readily be found, as you will recognize it by its epiploic appendices. Should a little bend of the small intestine present itself, push it up, and the large intestine will be found exactly in the sinus formed by the internal iliac fossa and the abdominal walls. Pull out enough of the intestine to make a protuberance as large as a small chicken's egg, and to prevent this part entering you can transfix it with two acupuncture-needles, which may be allowed to lie on the belly, holding the intestine in place. Now apply about fifteen metallic sutures, and as soon as they are fixed to pearl buttons or twisted you can take away the needles and the pincers. Then let the part be washed, and proceed to open the intestine."

This he does by a resection of the part protruding, and he then cuts off a section about three or four millimetres from the line of the sutures, taking all away to the centre, leaving the opening with a sort of collar of the intestinal wall that turns back. The intestine is quite thick here and vascular, so when it is cut several little arterial streams will jet out. So, therefore, he passes a thermo-cautery heated to a dull red over the part: that is, only on the outer surface of the cut, being careful not to touch the inner portion, which is to form the heel or spur. Sometimes when the intestine is opened fecal matter will be found, but not so frequently as one would think. If found it will have to be removed, but if not, it is best not to inject the intestine to remove any deposit. The surface presented is rough, folded on itself, and red in appearance, while it is covered with the intestinal mucus. The two orifices seem to be almost in the same axis, but if carefully looked at it will be seen that the angle is an obtuse one, so that a spur or heel is formed

on the inferior opening that prevents the fæces falling into it.

It takes twenty-five minutes to perform this operation, which includes dressing and all. The dressing is quite simple: a small compress of gauze-cloth which is dipped into a solution of carbolic acid (or a solution of corrosive sublimate) is placed over the wound. (The cloth has a hole cut in it a little more than the size of the opening, to correspond to it.) In the orifice itself is placed a very small fine sponge, wet with an antiseptic solution. This is destined to receive anything that may come down. Over this is placed a wad of the antiseptic cotton wadding, and lastly a bandage is placed around the body.

This operation differs from the usual one in three ways:

1st. By the direction given to the abdominal incision.

2d. By the formation of the heel or spur to separate the ends of the intestine.

3d. By the partial excision of the intestine, instead of the usual linear incision.

The first modification prevents the contraction of the opening, while the third acts in the same way, and the second impedes the fæces entering the lower bowel, thus preventing mechanical irritation, which, when the rectum is affected with cancer, causes very acute suffering. It is, of course, understood that in the rare cases where a cure may be hoped for, the old or Littré's operation is to be preferred. He promised to publish in a short time the results in three cases in which he had performed this operation. He could say already that the operative success had been complete and the relief from pain entire.

He proposes also to study the best method of fixing the intestine, as the borders of the wound are subject to inflammation. It may be best to only take in the sutures the skin, the peritoneum, and the intestine. Perhaps, also, it would be well to take off the sutures after the fourth day, which is long enough to be sure of the adherence of the peritoneum. It may even be well to take into consideration a method of fixation proposed by Maydl, of Vienna, which dispenses with sutures altogether.

Applications of the Antiseptic Method to Eye-Surgery.—Dr. Panas, the well-known eye-surgeon of the Hôtel-Dieu, spoke on this subject at the Academy of Medicine, saying, "I was an ardent partisan of Lister's method from the first, but I soon gave up the use of spray in ocular surgery. For my part, I am disposed to think that the only preparatory antisepsis for eye-operations should consist in thorough *lavements* with injecting instruments in the *cul-de-sac* and in all the folds of conjunctiva; sometimes even in the lachrymal passages; and when there is chronic catarrh of the parts that cover and are near the eye I do not neglect the nasal fossæ. All instruments, and in fact everything needed for operations, should be plunged into some antiseptic solution that has no irritative quality for the eyes. They can be wiped off afterwards just as needed with absorbent cotton that has been scorched over an alcohol-flame. After a number of experiments, I have convinced myself that a solution in water, at ten thousand, of the bichloride of hydrargyrum, or a similar solution of the bi-iodide of mercury at twenty-five thousand, is much superior to any other antiseptic solution employed in eye-surgery. A litre of water will dissolve four or five centigrammes of the bi-iodide of mercury. The preparation of the solution can be made in two ways: either by allowing a quantity of the bi-iodide salt to macerate for a long time in cold water, shaking it from time to time, or by dissolving in water at 50° C. one gramme of the bi-iodide in twenty-five litres of the water, or in any proportional quantity. When I am called in town and have to prepare a solution, I substitute the following:

"℞ Hydrarg. bichloridi, two centigrammes;
Aquæ, one litre. M.

"To this I add as much hydrochlorate of ammonia, or from two to four grammes of pure glycerin.

"The dressing after the operations is made with round bits of cloth that have a pomade of the bi-iodide on them, or they are dipped in a watery solution of calomel. (I find after the operation that the prolonged closing of the eyelids is advantageous.) The dressing should be renewed twice a day. I employ to cover the eyes, in place of Lister's gauze, simple carbolized cotton or the cotton with boric acid. This may be scorched a little. The results obtained by this system of eye-antisepsis have surpassed my best hopes, and erysipelas has been banished from our wards, while our operations cure without any accidents of any kind, including, as they do very often, such important operations as enucleation of the globe, extirpation of tumors, autoplasty, etc., all of which cure without any trouble."

Extirpation of a Cancerous Kidney.—Dr. Péan, the celebrated surgeon of the St. Louis Hospital, gave an account of this operation: "In late years the ablation of the kidney has come to be quite a frequent operation, owing to its displacement, or from fistulas or contusions that put the patient's life in danger. It is almost always from the back or lumbar region that the surgeons attempt the operation, and they meet with success as a rule. The ablation of the organ is rarely attempted for the large tumors that sometimes develop there, and particularly for the malignant tumors that sometimes acquire a considerable volume. The fact is that in such cases the lumbar region is not large enough, and the abdominal way is the only way to

reach and extract the tumor. Here it is not enough to open the abdomen, but a path must be created among the folds of the mesentery, the intestines must be pushed aside, and care must be taken not to interfere with the cellular tissue and the dilated vessels that one meets. You understand how very difficult this is when the tumor is large enough to fill up the whole of the belly, just as in the ninth month of pregnancy for instance. So this will explain why surgeons as a rule have not undertaken the operation. We have found some twenty-one cases that have been attempted; they gave ten cures and eleven deaths. Eight times the tumor was small enough to allow the operation to be made from the back; in these eight six succeeded and two died. Thirteen of the other cases had to be operated on from the abdominal side, and they gave nine deaths and four cures.

"The small number of successes was not very encouraging: so when I saw the patient that I now present to you some six years ago I was not disposed to attempt the operation. She then, as is the case with all of them, went to all sorts and kinds of doctors and took a large number of remedies. I saw her again some fourteen months ago, and notwithstanding the principal surgeons of London had refused to operate (she is English), she insisted that I should operate, which I did.

"I made an incision in the median line, from the pubis to the epigastric region. I cut the fold of the mesentery on the side of the bends of the small intestine, and pinched a number of the dilated veins found on its under surface. I then saw that the tumor was surrounded by an envelope proper to it, which allowed me to detach it partly with my fingers before proceeding further. I then commenced to cut it into small pieces, in this way taking away nearly all of the tumor. The patient here lost some blood, and we gave her a subcutaneous injection of ether. Arrived at the profound face of the tumor, we saw that it was attached to the right kidney and really planted in it: so, after having tied the renal vessels and the ureter together with two ligatures, we took away the kidney. We then brought together the folds of the mesentery by means of three partial ligatures, being very careful of the intestines, and we abandoned our ligatures in the belly. With all its difficulties, the operation took one hour.

"In three weeks the patient left the hospital, and finished her convalescence in the country. The tumor weighed six kilos. M. Robin examined it and found it was an epithelioma, so we feared it would not be long before she would have a return; but you see she is still in a sound state, and examination of the urine shows that the kidney remaining is enough to give a normal quantity daily, which is of the same chemical constitution as that of a woman in good health. This operation proves that the surgeon, when he finds himself in face of these large malignant kidney-tumors, must not despair of a cure."

Tænia Cysticerci in Man.—Dr. Troisier said that he had in the wards a man who entered the hospital for nephritis. In examining him he discovered in different parts of the body some small tumors that were subcutaneous and movable under the fingers. Some of them were superficial and formed quite a prominence, and others could only be felt on touching the place where they were concealed. For the most part they were but slightly elastic, and they were not at all painful. One of these small tumors, that was situated under the aponeurosis of the latissimus dorsi muscle, was removed for examination. It was an ovoid cyst, transparent, formed by an external shell and a vesicle, containing a liquid that looked like water, but in which Dr. Straus found the hooks of the worm and some calcareous corpuscles. So it was without doubt the cysticerci of the tænia that caused the tumors. No less than forty of these tumors were counted over the surface of the body. It is now known, since the researches of M. Redon, that the cysticercus of man is the same as that found in pork, which develops into the tænia solium. There is here an exception to the law of alternate generation, as this germ of the tape-worm can live in the scolex state in man as well as in the adult state. For this man to have become *ladré* or measly, he must have swallowed the eggs of the tænia, or, being himself afflicted with the solitary tape-worm, can he have infected himself with the eggs of his own tænia?

In this last supposition he believed that all must admit that the joint with the eggs got into the stomach instead of passing out with the evacuations. For the tænia does not hatch in the intestine itself; and, besides, the intestinal juice is not enough. It needs the gastric juice to permit the hexacanthe embryo to come out and penetrate the tissues. Finding that our patient had no tænia, he sought to find out how he could have swallowed the eggs of the tænia, or how it could have got into his stomach. All he could find out was that his wife has had tape-worm for seven years. He could not understand this coincidence. Without explaining this case, it is well to remember that in the country the eggs of the tænia may be swallowed in drinking water from streams that may be contaminated.

THOMAS LINN, M.D.

PARIS, April, 1885.

NEW ORLEANS.

THE thirty-sixth annual meeting of the American Medical Association conformed in its main features to the traditional pattern. The attendance was large, though

scarcely more than half the number present at the last session in Washington. The reason of this is not far to seek, when we reflect upon the geographical position of New Orleans, with a population not exceeding two hundred and fifty thousand, the centre of a vast region neither rich in people nor in wealth, and distant many hundreds of miles from any other city of equal population. This matter of remoteness had the same influence upon the *personnel* of the Convention as upon its numerical strength. Not even the additional attraction of the great World's Exposition prevailed to overcome the obstacles of time and distance and fatigue, and many of the strong men who have taken part in the proceedings in past years were absent, or present only in name. Nevertheless, the profession in all parts of the Union was, all things considered, fairly represented. The meetings were well attended, both in general and in sections, and a more than active interest was noticed in questions relating to the profession at large, and especially to its geographical representation in council.

The scientific work of the sections was not above the average of past years. In fact, the papers and the discussions which they elicited go far to confirm the view that the organization of the Association is not favorable to the best professional work. We observed the old tendency to be prolix, especially in some of the orations delivered in the morning sessions by the chairmen of sections.

The grateful acknowledgment of every delegate is due to the Committee of Arrangements. Rarely has the comfort of the Association been more efficiently looked to. The arrangements for registration were ample, and that disagreeable duty was performed without delay or crowding. The post-office was convenient and practical, and the gentleman in attendance courteous, prompt, and intelligent. The general meetings were held in the great hall of Tulane University, and the sections in the same and in the adjacent building. Ample accommodations were found in the hotels or in private boarding-houses. Not a few of the delegates, anxious to see something of the Creole life, which preserves the traditions of the ancient glory of the Crescent City, secured rooms in the French quarter. This plan was not without its reward. One sees but little in these days of the Creole at home. His fortunes are fallen, his glory has passed away, he has drifted down into an age the activity and struggles of which are too much for him. He bears his misfortunes with equanimity, but cherishes the memories of better days. He is obliged to let his rooms to strangers, but he is conscious of the humiliation, and is prone to refer rather mournfully to the past. In the old town one realizes to a fuller extent the changed life of the old population. Behind the plain fronts of the houses are found great airy halls, and spacious chambers furnished in a style which, faded as it is, tells the story of past wealth and luxury. Bronzes and tapestries and enamelled French clocks are here to be seen, the counterpart of which scarcely exist outside of France, and there are broad galleries looking out upon gardens surrounded with high walls and for the most part still well kept, where grow, among more familiar flora, sub-tropical fruits and flowers which we call exotics. Running out from these old houses and overlooking the gardens are the high, small-roomed annexes formerly occupied by the slaves, providing ample space for the solitary charwoman who now forms the sole retainer of the house. These old servants speak English and French with equal facility, but prefer to express themselves in that curious patois which the American residents term, in derision, Gumbo French. More curious, more interesting I should say, than the exotics of the garden, are the exotics of the house,—plants that in more than a century are still strange to the soil. These people are neither French nor American. Too long exiled to be the one, they have lived too remote from the life of the other to grow into it.

One is struck in New Orleans, when surrounded with French society, with the absence of the Frenchman's proverbial gayety. During our brief stay we found the living in New Orleans good, but rather expensive. There was much private entertainment, and several handsome receptions were given, both inside the profession and outside its ranks. Those among us were perhaps most fortunate who had comfortable rooms and were put down at one of the clubs, where excellent meals are served at a very moderate cost. There is much of interest to engage the attention of the new-comer, much to surprise him. Lottery-tickets are exposed in the shop-windows, and a great licensed gambling-room opens upon the principal streets. The streets are filthy, the gutters foul; in many places they degenerate into wide, open drains filled with stagnant water, scum-covered and stinking. Household offal is emptied into the unpaved streets. The French market is an abomination. To a visitor from the North the marvel is, not that New Orleans suffers from serious outbreaks from epidemic diseases, but that she is ever free from pestilence. Owing to the lowness of the level and the character of the soil it is impossible to dig graves, and the dead repose in vaults built above the surface. This repose is not always an unbroken one. Tiers of vaults large enough for a single coffin are built along the sides of some of the cemeteries. These are occupied for the most part by the dead of the poor or moderately well off. It was the misfortune of the writer to come across some workmen raking out the contents of one of these vaults. They were the coffins of children broken and scattered with

their contents. Probably the family had defaulted upon the rent.

To return to the Convention (*nos moutons*). The most important measure which occupied the attention of those present related to the International Medical Congress of 1887. The committee appointed at the last meeting to present the invitation at Copenhagen on behalf of the medical profession of the United States, reported that the invitation had been accepted and the preliminary organization effected. This report was, on motion, made the special order of business for the following day at twelve o'clock. The action of the Association is well known to the profession. What its results will be remains to be seen. Every true friend of the medical profession of the United States must realize the dangers which now threaten not only the success of the International Congress, but also the welfare of the Association itself. It is to be hoped that the members of the joint committee will act with the deliberation and judgment demanded by the important interests at stake, that personal ill feeling and petty personal ambitions will yield to the general welfare, and that wise action will triumph over passion and prejudice. The discussion of this report and of the resolutions to which it gave rise brought into unpleasant prominence the defects of organization of the Association and the lack of discipline among its delegates. It is worthy of comment that the voting was carried on in an extremely loose and irregular way, and that there were no means by which to distinguish delegates entitled to vote from non-qualified voters, the sense of the meeting being taken *viva voce*. It is to be hoped in future meetings for the transaction of general business, either that delegates only will be admitted to the floor, or else that every voting delegate will be required to wear a conspicuous badge.

Another matter of considerable interest related to the future of the *Journal*. We congratulate the profession that the disposition of Dr. Davis to resign his position as editor was not carried into effect. And we congratulate Dr. Davis upon the success which has attended his self-sacrificing efforts in behalf of the *Journal* thus far. We join with him in the hope that the *Journal* will ere long assume its true position as the official exponent of the views and the work of the Association, and through it of the profession of the United States. The selection of St. Louis as the next place of meeting was in violation of the action of the Association taken last year, by which it was determined to meet each alternate year at Washington, D.C., and will probably give rise to dissatisfaction among the more thoughtful members of the Association, in view of the important matters which will then come up for discussion.

To the American Medical Association, as to other similarly organized bodies, this Creole proverb, difficult to translate, but pregnant with meaning, is applicable,—"*Marché narien, lazambes qui bisoin.*" M. Z.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN MEDICAL ASSOCIATION.

THE Thirty-sixth Annual Session of the American Medical Association was held at New Orleans, from April 28 to May 1, inclusive. The Committee on Arrangements provided Tulane Hall for the general meeting and for the section on Medicine, the other sections meeting in the lecture-rooms of the Tulane University and Grunewald Hall.

The committee under Dr. Logan deserve high praise for their labors: they planned wisely and well in securing the comfort of the members and the success of the meeting. Receptions in honor of the Association were given by Prof. T. G. Richardson, Mr. Cartwright Eustis, the New Louisiana Jockey Club, and by the medical profession, assisted by the ladies of New Orleans, which contributed materially to the social enjoyment of the members present.

First Day's Proceedings.—The session was opened by prayer on Tuesday morning, at eleven o'clock. Dr. Samuel Logan, of New Orleans, chairman of the Committee on Arrangements, delivered a brief

ADDRESS OF WELCOME.

He eulogized the Association and the great profession which it represents, referred to the last meeting of the Association in this city more than a decade ago; speaking eloquently and reverently of the memory of the great man who did so much to unite the profession after the war, and who, with this end in view, urged the selection of New Orleans for that meeting. By personal efforts also he secured the election of a distinguished Alabamian as President of the Association; his wishes were followed in afterwards electing his pupil, Dr. Richardson, of New Orleans, and also in the choice of the present incumbent, another distinguished Southerner, Dr. F. F. Campbell, of Augusta, Ga.

In conclusion the speaker referred to Prof. Gross in the following words: "Would, Mr. President, he were with our other ex-Presidents at your side on this occasion! To few, indeed, is it given to be great in heart as well as brain; but were we asked to point from our ranks a single instance of this happy combination, what name would spontaneously start from every lip but that of Samuel D. Gross? May his well-spent life prove an ever-fruitful example for the young men of our profession, and may his noble spirit be ever present with us all, to bind us with an enduring bond of brotherhood."

The ex-Presidents of the Association were invited to take seats upon the platform: Drs.

N. S. Davis, of Chicago; T. G. Richardson, of New Orleans; and J. M. Jones, of Washington, complied.

After the presentation of the programme by the Committee on Arrangements, including invitations to several entertainments, Dr. Henry F. Campbell delivered the

ANNUAL ADDRESS OF THE PRESIDENT.

The address began with a glowing tribute to the distinguished members of the profession who had formed the Association, and whose wisdom had guided its deliberations. He said, "Far lagging in the rear would have been the Old World had it neglected the record and literature of the New. In the long line of our noble ancestry, among others who adorn the gallery of our progenitors, Rush and Physick, McDowell and Atlee, Deadrick and Smith, Dudley and Eve, Silliman and Hays, Mott and McClellan, Gross and Sims—some of these among the illustrious dynasty of this Association—have each opened to the minds of all nations new fields of science, of labor, and of literature, in which to energize,—and, dying, have all left their impress deeply and ineffaceably graven upon the tablets of scientific progress of the Old as well as of the New World. Now, may we ask, who dares *not* to read?" From eulogy of the dead the speaker turned to praise of the master-minds still living,—"the contemporaneous makers of the scientific history of our own times." He made an eloquent plea for words of encouragement and loving sympathy to those who are still living. "Who is it that has fought shoulder to shoulder with another in the veteran grand army of the world's campaigns, and has seen him fall out of the ranks to rise no more; who is it that has stemmed with another the current of the mighty river of Time, or battled with the waves on the tempestuous ocean of Life, and seen him suddenly and forever sink beneath the dark waters, and has not mourned the last word unspoken and bitterly cried out, 'Too late?' The good-will and the assurance he had been longing to utter have failed of their application, and they remain in his tender heart like 'unused spices' in the hands of loving women at the Saviour's tomb." "Custom and convention allow praise, panegyric, and loud lamentations to the dead, but command silence and repression to the living, however loved and worthy, and however near their journey's end." In doing honor to the venerable men who had faithfully served the Association, he finally singled out one "who, at the present time and before the present generation of laborers in the field, might stand prominent among us only by the encouraging and ever-inspiring magnetism of his presence, and by the stupendous and self-sacrificing labor in which he is ever willing to engage. He labors now as he did twoscore years ago. Well entitled is he to the honored name of 'the father!' No one of the sons of this Association can excel him in watchfulness for its interests, in tenacity for its honor, in unceasing labor for its advancement. No neophyte or tyro is he in its affairs. He presided at its birth, nursed it through infancy and childhood, was the guide and counsellor of its manhood, and now, in its ripe maturity, adds spirit to its energies, watches its progress, faithfully guards its good name, and is the laborious chronicler and promulgator of its intelligence.

"Too full of the meekness of wisdom to be elated by praise, too worthy of praise to be defiled by flattery, and among all the living standing foremost in the duration and constancy of his devotion, I could almost ask you to allow me, by virtue of the authority in which I am clothed, to bid him stand, as sovereigns bade their heroes kneel, and dub him with the ensign and the title, 'Noblest Roman of us all.'"

Congratulating the Association next upon the place selected for meeting, he also spoke in praise of the *Journal* as a great advance over the old form of publishing the proceedings. He referred to the meeting of the International Medical Congress of 1887 as promising great benefit and improvement to the medical profession of this country. The executive officials of these two great trusts, he declared, had faithfully and laboriously brought them to a state of progress assuring of brilliant and permanent results. The remainder of the address was devoted to the consideration of the present unsatisfactory relations of the medical profession to tribunals of law. The low estimate placed upon the value of medical testimony, the fact, according to the common law of England and in many of our own States, that testimony may be extorted from physicians, and the frequency of trials for malpractice in which the surgeon appears as defendant, are subjects deserving and demanding attention by the members of the Association. In conclusion, he recommended the addition of a section on Forensic Medicine, which should comprehend all the legal questions arising in the several departments of medicine; but besides them, "every question or occasion through which the medical man can be brought into relation with the tribunals of the law, whether as a medical witness, as a medical expert, or as a medical defendant; or in time, when he shall have attained his true dignity as Amicus Curiæ or adviser of the court, his dictum equivalent to conclusive evidence, his scientific wisdom worthily rewarded as enlightenment indispensable in the upholding of justice, and his profound and conscientious opinion accepted with the same unquestioning confidence in its integrity as that which is yielded to the judicial ermine and the charges from the bench." In conclusion, he requested that a committee be appointed to consider the expediency of organizing a section of Forensic Medicine, than which none could be of higher importance in

the present and in the future. In time may we not be able to prophesy of legal medicine, in the words of the now almost mythic Seneca, "The day will come when those things which are now hidden shall be brought to light by true and persevering diligence,—when our posterity will wonder that we should have been so ignorant of that which is so obvious."

A vote of thanks was tendered the President for his address, and a committee of five was directed to be appointed to which the suggestion with regard to a section on Forensic Medicine was referred. The Secretary subsequently announced the committee as follows: Drs. J. H. Quinby, X. C. Scott, W. W. Dawson, F. E. Daniel, J. V. Shoemaker, Eugene Foster, and H. F. Campbell.

MEMORIAL OF PROF. S. D. GROSS.

Dr. T. G. Richardson, on behalf of Dr. Austin Flint, chairman of the Special Committee appointed at the last meeting for this purpose, read a report embodying a sketch of the professional life of Professor Gross for publication in the Transactions of the Association. It was accepted and referred to the Committee on Publication.

NEW FIRE-PROOF BUILDING FOR THE ARMY MEDICAL MUSEUM.

Dr. J. S. Billings presented a special report upon the new fire-proof building for the Army Medical Museum and Library of the Surgeon-General's Office, for which Congress had made an appropriation, and upon which work will begin in a very short time. In behalf of the Medical Department of the Army he returned thanks to the Association for the tokens of confidence and approval manifested by it, in appointing the committee to aid in securing the appropriation.

INTERNATIONAL MEDICAL CONGRESS.

Dr. Billings also presented the preliminary report of the plan of organization of the International Medical Congress prepared by the Executive Committee, as instructed at the last meeting of the Association.

On motion of Dr. J. Keller, of Arkansas, the report was made the special order for the succeeding day at twelve o'clock.

MONUMENT TO DR. BENJAMIN RUSH.

A report on the erection of a monument in the city of Washington to Dr. Benjamin Rush, signed by Dr. A. L. Gihon, chairman of committee, was read, and, on motion by Dr. Jones, made the special order for Friday morning.

A number of visiting physicians were invited to participate in the proceedings.

DISCOVERER OF SURGICAL ANÆSTHESIA.

Dr. R. A. Kinloch presented a communication from the Medical Association of South Carolina upon the subject of the discovery of the anæsthetic properties of ether. On motion of Dr. R. Beverley Cole, it was referred to the section on Medicine, with a request that it furnish a report on the same to the Association.

The titles of several papers were read, and on motion they were referred to the section on Surgery.

Second Day's Proceedings.—The Committee on Arrangements read some announcements, and a telegram from Dr. W. O. Baldwin, of Montgomery, Alabama, one of the Vice-Presidents, regretting his inability to be present. The Committee on Nominations was announced.

ADDRESS OF CHAIRMAN OF SECTION ON PRACTICAL MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

Dr. H. D. Didama, of Syracuse, New York, read the Address in Medicine, which commenced with a reference to cocaine hydrochlorate and the comma-bacillus, and expressed his belief in the formula, No comma-bacillus, no cholera. Acknowledging the existence of a large class of diseases due to bacteria, he did not think it necessary to agree with the mycologist in his effort to force all diseases into this category. There are disorders arising in the nervous system, or from deficient or defective blood-supply, or from diseased cells, as well as from germs, and by the interaction of these morbific influences diseases are produced. Passing from these, the reparative force, the *vis medicatrix naturæ*, the resisting power to disease, and the effects of the varying degrees of these upon the individual, were considered. In conclusion, he said,—

"No man liveth for himself alone. The good constitution, the strong resisting-power of the temperate and upright man, is not only a sure personal defence against diseases and a guarantee of longevity: it is transmitted to his offspring down to many generations. The dissolute man, broken down with diseases acquired while sowing his wild oats, suffers not alone. If he did, we might view the transaction with mitigated sorrow. He had his coarse enjoyment, and he can afford to reap corruption. But the evil that he does lives after him, in the blighted and wretched lives of his innocent children and his children's children. A priceless inheritance is a strong resisting combined with a vigorous recuperative power. He who has it and preserves it and fortifies it, living a clean and active life, eschewing bodily and mental excesses and clinging to the divine promises, may bid defiance to disease in its multifarious forms. He need not be afraid for the pestilence that walketh in darkness, nor for the destruction that wasteth at noonday. Free from fear,—the greatest depressant,—he shall walk unscathed through all perils. A thou-

sand may fall at his side, and ten thousand at his right hand, but disaster shall not come nigh him. And even when the onslaught of disease cannot be wholly warded off, the wounds inflicted shall have speedy healing."

ADDRESS ON OBSTETRICS AND DISEASES OF WOMEN.

Dr. R. Stanley Sutton, of Pittsburg, chairman of the section, next delivered his address, dwelling chiefly upon the history of ovariotomy, the title being "A Brief Review of the Growth of McDowell's Operation at Danville, Kentucky, in 1809, and its Present Status." The operation on Mrs. Crawford was performed before the days of anæsthetics. No antiseptics were used, except the pure air of a border town. No sponges were used on the abdomen, and the pedicle was dropped in after ligaturing. The patient survived the operation thirty years. The next operation was done in 1820. As late as 1862, but one success had been reported in Scotland: that was in a patient of Keith. In the United States, by 1843, eighteen cases had been reported, and in 1863 over three hundred cases had been operated on in this country.

Dr. Sutton showed that out of McDowell's operation had grown all the recent developments of intra-abdominal surgery, and claimed that the deviations from the method of performing the operation of ovariotomy were comparatively unimportant, the most decided being the introduction of the galvanocautery by Baker Brown, and the cutting short of the ligature, as practised by N. R. Smith. He insisted upon the absolute necessity of surgical cleanliness in the operations, Listerism being the "gospel of cleanliness."

After reviewing the details of the modern operation, he closed with a warm tribute to the memory of Sims, who, like McDowell, had a genius for original investigation.

"He was beloved by his own countrymen and honored by the whole world."

PENINSULAR AND SUB-PENINSULAR AIR AND CLIMATE.

The construction of a health city in Florida was the subject of a volunteer paper by Dr. W. C. Van Bibber, of Baltimore, the object being to give information with regard to winter resorts for invalids. The benefit of the climate of the Gulf coast of Florida has been demonstrated by experience: he thought if a city uniting medical, social, and scientific interests could be founded in the sub-peninsular portion of Florida, that it would be without a rival as a sanitarium.

DISCUSSION OF REPORT OF COMMITTEE ON THE INTERNATIONAL MEDICAL CONGRESS.

The motion to adopt the report was opposed by Dr. J. V. Shoemaker, on the ground that the committee had exceeded its powers, and had been premature in organizing the Congress and in filling the offices. It was also claimed that the committee had failed to recognize men of eminence in the profession in the South and West.

A spirited discussion followed a motion by Dr. Daniels, of Texas, to reject all the officers proposed by the committee, and authorize the Committee on Nominations to make the appointments for the Congress. Finally, an amendment offered by Dr. Keller, of Arkansas, was substituted for Dr. Daniels's motion:

"*Resolved*, That the Committee appointed by the American Medical Association to arrange for the meeting of the International Medical Congress of 1887 be enlarged by the addition of members from this Association, one from each State and Territory, and from the Army and Navy and the Marine Hospital Service, and the District of Columbia, to be appointed by the present presiding officer, Dr. J. S. Lynch, of Baltimore, First Vice-President; and that this Committee, thus enlarged, shall proceed to review, alter, and amend the action of the present Committee as they may deem best."

An attempt was made to substitute a motion to adopt the report of the committee, by Dr. Sanders, of Tennessee, and was promptly voted down.

Dr. W. A. Byrd, of Quincy, Illinois, amended by moving that members of the committee from States represented at this meeting shall be named by the delegations, and members from the States not represented shall be appointed by the President. Dr. Keller accepted the amendment, and the resolution was carried.

Third Day's Proceedings.

OFFICERS OF SECTIONS.

The amendment offered by Dr. Foster Pratt, of Michigan, empowering each section to elect its own officers, was, after discussion, laid upon the table until the next meeting.

REPORT ON METEOROLOGY.

Dr. N. S. Davis, chairman of the Standing Committee on Meteorological Conditions and their Relations to the Prevalence of Diseases, presented a full report, including a communication from Prof. K. H. Long, of the Northwestern University. The report was ordered to be published and the committee continued.

THE COLLECTIVE INVESTIGATION RECORD.

Dr. Davis also reported from the Committee on Collective Investigation of Disease in Co-operation with the committee of the British Medical Association.

The report stated that these special investigations into disease were going on in nearly all the European countries, in India, the United States, and South America.

The committee recommended that they be authorized to continue their correspondence with the committee of the British Association and the committee of the International Congress, and that the detailed work be carried on by committees appointed by State Societies co-operating with the Central Committee and General State Committee. The Central Committee would act as the medium of communication between the local and foreign committees. The recommendation was adopted and referred for publication.

THE INTERPRETATION OF ETHICAL POINTS.

Dr. Davis, as the chairman of a special committee appointed last year to make some declarative interpretation of certain points in the Code of Ethics, submitted a report in the following form:

"*Whereas*, Persistent misrepresentations have been and still are being made concerning certain provisions of the Code of Ethics of this Association, by which many in the community and some even in the ranks of the profession are led to believe those provisions exclude persons from professional recognition simply because of differences of opinions or doctrines; therefore

"1. *Resolved*, That clause first of Article IV. in the National Code of Medical Ethics is not to be interpreted as excluding from professional fellowship, on the ground of differences in doctrine or belief, those who in other respects are entitled to be members of the regular medical profession. Neither is there any other article or clause of the said Code of Ethics that interferes with the exercise of the most perfect liberty of individual opinion and practice.

"2. *Resolved*, That it constitutes a voluntary disconnection or withdrawal from the medical profession proper to assume a name indicating to the public a sectarian or exclusive system of practice, or to belong to an association or party antagonistic to the general medical profession.

"3. *Resolved*, That there is no provision in the National Code of Medical Ethics in any wise inconsistent with the broadest dictates of humanity, and that the article of the Code which relates to consultations cannot be correctly interpreted as interdicting, under any circumstances, the rendering of professional services whenever there is a pressing or immediate need of them. On the contrary, to meet the emergencies occasioned by disease or accident, and to give a helping hand to the distressed without unnecessary delay, is a duty fully enjoined on every member of the profession, both by the letter and the spirit of the entire Code.

"But no such emergencies or circumstances can make it necessary or proper to enter into formal professional consultations with those who have voluntarily disconnected themselves from the regular medical profession in the manner indicated by the preceding resolution.

"N. S. DAVIS, of Chicago;
"A. Y. P. GARNETT, of Washington;
"H. J. CAMPBELL, of Augusta;
"AUSTIN FLINT, of New York;
"J. B. MURDOCH, of Pittsburg."

The resolutions were unanimously adopted.

ADDRESS ON SURGERY AND ANATOMY.

Dr. Duncan Eve, of Nashville, Tennessee, as chairman of the section on Surgery, read an address on recent advances in operative surgery. Special mention was made of the contributions of Dr. H. B. Sands, of New York, "On Internal Œsophagotomy;" Dr. J. H. Packard, of Philadelphia, on "Colotomy;" Dr. F. Lange, of New York, on "The Treatment of Bone Cavities in the Lower End of the Femur;" Drs. Keen and Musser, of Philadelphia, on "Cholecystotomy;" Dr. L. L. Pilcher, on "The Treatment of Wounds," and others. Surgical literature was then reviewed and some recent additions mentioned. The address closed with a touching tribute to the memory of the late Prof. Gross.

MISCELLANEOUS BUSINESS.

The Address on State Medicine, by Dr. E. W. Shauffler, of Missouri, was read by title, and referred. The Treasurer, Dr. R. J. Dunglison, of Philadelphia, presented his annual report, showing a balance on hand of $932.11, with an increase of one hundred and twenty-five new members. The plan adopted last year of admitting members by application had resulted in decidedly increasing the income of the Association.

The Report of Dr. Kleinschmidt, of Washington, the Librarian, was ordered to be printed without reading. Dr. J. M. Jones read the report of the Committee on Publication, including the report of the Board of Trustees of the *Journal*.

PUBLICATION OF THE JOURNAL.

According to the statement made, the *Journal* is out of debt at the end of its second year, its total income for 1884 having been twenty-one thousand dollars, and the total expenses, excepting editorial, twelve thousand dollars.

The place of publication will continue to be Chicago. The trustees took pleasure in announcing that, at their unanimous and earnest request, Dr. Davis had consented to withdraw his resignation, so positively tendered last year, and to continue as editor-in-chief under certain conditions, which were accepted by the trustees.

At the conclusion of the report Dr. Davis was called forward by the applause of the meeting, and made a few remarks referring to his stewardship. He explained the difficulties under which he had labored in conducting the *Journal*, and gave some whole-

some advice in regard to the course to be pursued. He urged the Association to have patience with the *Journal*,—not to expect it to rival immediately the Journal of the British Association. If prudently managed, and carried on within the limits of the revenue at hand, it would in the course of ten years become an enterprise not only supporting itself, but affording a fund for the prosecution of original scientific investigations.

PRIZES FOR ORIGINAL RESEARCH.

Dr. N. H. Reed, of Mansfield, Ohio, offered a resolution, which was adopted, establishing first and second honor prizes at the next meeting of the Association for the best and second best papers read in each section.

STATE BOARDS OF MEDICAL EXAMINERS.

Dr. J. B. Roberts, of Philadelphia, offered a resolution from the section on State Medicine, earnestly advocating the establishment in every State and Territory of Boards of Medical Examiners, who shall examine all practitioners, and whose license shall be the only license to practise medicine. Action upon this was deferred until the next morning.

DR. RUSH'S STATUE.

The report of the committee recommending the erection of a monument to Dr. Benjamin Rush, of Philadelphia, in Washington, was read by the Secretary. The report was ordered published and the attached resolution adopted, providing for the appointment of a standing committee on the Rush Monument, which is to be built by means of a fund made up of subscriptions of one dollar each from the physicians of the United States and such additional donations as may be made.

The following committee was named: Drs. A. L. Gihon, Washington; Henry H. Smith, Philadelphia; R. A. Kinloch, Charleston; S. C. Gordon, Portland, Maine; H. Murphy, of Tennessee; and Morris H. Henry, of New York.

NOMINATIONS FOR OFFICERS.

Dr. Kinloch, for the Committee on Nominations, reported the following officers for election:

President.—Dr. William Brodie, of Michigan.

First Vice-President.—Dr. Samuel Logan, of Louisiana.

Second Vice-President.—Dr. A. Y. P. Garnett, of District of Columbia.

Third Vice-President.—Dr. Charles Alexander, of Wisconsin.

Fourth Vice-President.—Dr. W. F. Peck, of Iowa.

Secretary.—Dr. W. B. Atkinson, of Philadelphia.

Treasurer.—Dr. R. J. Dunglison, of Philadelphia.

Librarian.—Dr. C. H. A. Kleinschmidt, of Washington, D.C.

Section on Practice of Medicine, Materia Medica, and Physiology.—Chairman, Dr. J. T. Whitaker, Ohio; Secretary, Dr. B. L. Coleman, Kentucky.

Section on Obstetrics and Diseases of Women.—Chairman, Dr. S. C. Gordon, Maine; Secretary, Dr. J. F. Y. Paine, Texas.

Section on Surgery and Anatomy.—Chairman, Dr. N. Senn, Wisconsin; Secretary, Dr. H. H. Mudd, Missouri.

Section on Ophthalmology, Otology, and Laryngology.—Chairman, Dr. Eugene Smith, Michigan; Secretary, Dr. J. Fulton, Minnesota.

Section on Diseases of Children.—Chairman, Dr. W. D. Haggard, Tennessee; Secretary, Dr. W. B. Lawrence, Arkansas.

Section on Oral and Dental Surgery.—Chairman, Dr. J. H. Marshall, Illinois; Secretary, Dr. A. E. Baldwin, Illinois.

Section on State Medicine.—Chairman, Dr. J. S. Rauch, Illinois; Secretary, Dr. F. E. Daniel, Texas.

Committee on Necrology.—Dr. J. M. Toner, of Washington, D.C., Chairman; C. H. Franklin, Alabama; D. A. Linthicum, Arkansas; C. H. Denison, Colorado; William F. Lancaster, Florida; J. T. Hibbard, Indiana; William Watson, Iowa; Charles Oterman, Kansas; D. S. Reynolds, Kentucky; E. S. Lewis, Louisiana; T. A. Foster, Maine; H. O. Marcy, Massachusetts; W. Brinton, Maryland; W. F. Breakey, Michigan; G. F. French, Minnesota; B. F. Ward, Mississippi; J. M. Scott, Missouri; E. W. Jones, New Hampshire; Stephen Wickes, New Jersey; J. Lewis Smith, New York; Thomas F. Wood, North Carolina; F. G. Fuller, Nebraska; Q. Chapman, Ohio; I. M. Hays, Pennsylvania; W. E. Anthony, Rhode Island; Thomas Legare, South Carolina; J. L. Sim, Tennessee; Joseph Sears, Texas; C. F. Chandler, Vermont; L. B. Edwards, Virginia; W. F. Howells, West Virginia; J. K. Bartlett, Wisconsin; W. R. Forward, United States Army; H. W. Austin, United States Marine Hospital Service; N. L. Bates, United States Navy; J. J. McAhran, Wyoming; W. E. Duncan, Dakota.

Judicial Council.—Drs. R. A. Kinloch, South Carolina; D. D. Sanders, Tennessee; T. G. Richardson, Louisiana; D. A. Ketchum, Alabama; G. Baird, West Virginia; J. M. Toner, Washington, D.C.; A. M. Pollock, Pittsburg, Pennsylvania.

St. Louis was recommended as the place of meeting, and the time for the assembling of the next annual session, the first Tuesday in May, 1886.

On motion, the report was adopted, and the candidates elected for the respective offices named.

A supplemental report was promised for the succeeding day.

Dr. Brodie tendered his resignation as a member of the Judicial Council, which was accepted.

Fourth Day's Proceedings.—The Vice-President occupied the chair in the absence of the President.

The Secretary read the names of the

ADDITITIONAL MEMBERS OF THE COMMITTEE ON ARRANGEMENTS FOR INTERNATIONAL CONGRESS.

Arkansas, D. A. Linthicum; Alabama, G. A. Ketchum; California, R. B. Cole; Connecticut, —— ——; Delaware, L. P. Bush; Georgia, R. Battey; Kansas, D. W. Stormont; Louisiana, J. W. Dupree; Massachusetts, A. H. Wilson; Michigan, A. R. Smart; Mississippi, J. M. Taylor; New Jersey, W. Pierson; New Hampshire, J. W. Parsons; North Carolina, —— ——; Pennsylvania, J. V. Shoemaker; South Carolina, R. A. Kinloch; Texas, J. W. McLaughlin; Virginia, W. C. Dabney; Wisconsin, N. Senn; Colorado, C. Denison; District of Columbia, A. Y. P. Garnett; Florida, R. S. Murray; Illinois, E. P. Cook; Indiana, F. W. Beard; Iowa, W. Watson; Kentucky, W. H. Wathen; Maine, S. C. Gordon; Maryland, J. S. Lynch; Minnesota, E. French; Missouri, N. F. Essex; New York, E. Eliot; Nebraska, R. C. Moore; Ohio, X. C. Scott; Rhode Island, W. E. Anthony; Tennessee, F. A. Sim; Vermont, C. L. Allen; West Virginia, G. Baird; United States Army, Surgeon-General Murray; United States Navy, Surgeon-General Gunnell; United States Marine Hospital Service, Surgeon-General J. B. Hamilton.

The committee met and organized during the morning by the election of a chairman and secretary, in accordance with a resolution offered by Dr. Quinby, of Jersey City, which also empowered it to fill all its own vacancies and to make all necessary arrangements for the International Congress, and to appoint the officers of the Congress.

The Committee on Nominations presented their final report, as follows:

New Trustees of the Journal of the American Medical Association.—E. M. Moore, M.D., New York; J. H. Hollister, M.D., Illinois; J. M. Toner, M.D., District of Columbia.

Committee of Arrangements.—Chairman, Le Grand Atwood, M.D., St. Louis.

Assistant Secretary.— Wm. C. Glasgow, M.D., St. Louis.

Judicial Council (to fill vacancy caused by resignation of Dr. William Brodie).—J. K. Bartlett, M.D., Wisconsin.

The report was adopted.

PRIZES FOR CONTRIBUTIONS.

On motion of Dr. Reed, a resolution was adopted appointing a special committee of three to devise a plan for awarding honors, in accordance with the previous motion, for papers read before the different sections at the next meeting of the Association.

The resolution of Dr. Roberts, submitted yesterday by the section on State Medicine, etc., was taken up and adopted, recommending that steps be taken to establish in each State Boards of Examiners of Medical Licenses, whose certificates shall be the only authority to practise medicine in those States.

COMMITTEE ON CREMATION.

A resolution by Dr. Kinloch that, in the near future, if not now, cremation will become a sanitary need in the cities, was referred to a special committee, to report at next meeting.

Dr. J. A. White, of Richmond, Virginia, chairman of the section on Ophthalmology, Otology, and Laryngology, delivered an address, in which he reviewed recent progress in these branches. He devoted considerable space to a statement of the great value of cocaine in operating upon the eyes, nose, and throat.

Dr. J. H. Pope, of Texas, chairman of the section on Diseases of Children, made a verbal communication giving the substance of his paper, summing up the advances made in the treatment of diseases of children.

No report was received from the chairman of the section on Oral and Dental Surgery, Dr. W. A. Allport, of Illinois, who was absent. The chairman was authorized to send his report to the Publication Committee.

The Special Committee upon the President's Address presented a report recommending the organization of a section on Forensic Medicine. By resolution, action was deferred upon it until next meeting, it being in the nature of an amendment.

A resolution was offered forbidding members of the Nominating Committee from placing themselves as candidates for office, by Dr. Cochran, of Mobile; but, after some remarks by Dr. N. S. Davis, it was withdrawn.

Dr. Morris H. Henry, of New York, was appointed a delegate to the British Medical Association.

A resolution was passed thanking the Committee on Arrangements, medical profession of New Orleans, the clergy, Dr. and Mrs. T. G. Richardson, Mr. and Mrs. Cartwright Eustis, New Louisiana Jockey Club, and the citizens of New Orleans, for their hospitalities.

Dr. William Brodie, of Michigan, the President-elect, was escorted to the chair by ex-Presidents Drs. Toner and T. G. Richardson. In taking the chair Dr. Brodie made some appropriate remarks, thanking the Association for the honor conferred upon him.

Dr. Davis, preliminary to moving an adjournment, spoke of the great good accomplished by the annual meetings in fraternizing and consolidating the medical profession. He expressed the warm thanks of the Asso-

ciation for their pleasant reception in the Crescent City.

The meeting then adjourned.

[The analysis of papers and discussions before the several sections will appear in the next issue of the TIMES.—ED.]

THE AMERICAN SURGICAL ASSOCIATION.

(Continued from page 598.)

SECOND Day.—Dr. J. Collins Warren, of Boston, read a paper embodying the results of a number of experimental studies upon

THE HEALING OF ARTERIES IN MAN AND ANIMALS AFTER LIGATURE.

The object of this paper was to study the various pathological changes which occur in and around the vessel from the time the ligature has been applied until the process of cicatrization has fully completed itself. These processes are not unlike those occurring in a long bone after fracture. There is in both an external and an internal callus, the former having only a provisional existence in the case of arteries, and subsequently giving place to ligamentous union of the divided fragments; the latter undergoing such changes in the later stages of the process that the canal or lumen of the vessel is imperfectly re-established by the so-called canalization of the thrombus.

In the mean time the walls of the vessel have undergone certain changes which enable them to participate in the final process of repair. The ligatured artery is invested by a protective layer of new tissue formed from the periadventitial tissue, which, if well developed, gives great security against hemorrhage until the permanent cicatrix has grown sufficiently strong. This may be likened to the provisional callus of bone. There is also an internal growth or callus formed from several sources,—namely, the intima to a slight extent, the media more largely, also from cells finding their way from the periadventitia at a late stage through the retracted ends of the vessel. The thrombus is a mere passive structure, takes no part in the growth, but is protective, and affords an excellent medium for the new tissue to germinate in. When the provisional part of the internal callus has disappeared, we find remaining a cicatrix closely resembling the three coats of the artery, and affording by virtue of its peculiar structures an equally effective resistance to the pressure of the blood-column. The ligament which unites the two ends of the vessel represents in part the residue of the external callus, but also a portion of the walls of the vessel which have been absorbed during the inflammatory process. A vessel successfully ligatured in its continuity cannot, therefore, be said to have been "ulcerated" into two separate portions, but must be conceived of as a hollow tube which has solidified into a solid columnar mass of tissue, a considerable portion of which subsequently shrinks into a cord.

Dr. N. Senn, in opening the discussion, called attention to the facts that in these experiments not the minimum amount of damage had been done to the vessel in applying the ligature; they were not done under antiseptic precautions to prevent the entrance of external agents into the wound from the atmosphere. It is evident that the healing of arteries after ligation is due to connective tissue and its allies the epithelial cell and its congeners. To bring about closure of the vessel it is only necessary to bring its walls in contact; the use of greater force is accompanied by the infliction of greater amount of injury than is necessary, and only increases the danger of suppuration. The ligature is not applied in order to divide the middle or internal tunic, but merely to bring the walls in contact with each other, when the vessel closed by primary union or by granulation. When a permanent ligature is applied, it is either absorbed or leads to necrosis of the vessel. The ideal ligature is one which would merely keep the walls of the vessel together until its lumen is obliterated, and then be absorbed or removed.

The comparison to a fractured bone he regarded as a very happy one, which led him to remark that the best treatment after fracture of a bone is where we obtain a minimum amount of callus; and in applying a ligature we should aim to get a minimum amount of exudation. This he believed could be done by the application of a temporary ligature under strict antiseptic precautions. He referred to his former experiments with a double ligature, in which this result was attained. When a permanent ligature is used it is necessary to produce complete division of the tunics, thus increasing the danger of secondary hemorrhage.

He could not accept the views of the lecturer as to the participation of muscular fibres in the process of repair; he thought, on the contrary, that upon cessation of the function of the artery its muscular tissue would undergo fatty degeneration and atrophy. He believed that the occurrence of aneurism is only prevented by the development of connective tissue strong enough to resist the intra-arterial tension.

Dr. Gunn thanked the lecturer for the light shed upon the process of repair in arteries after ligation. For twenty-five years he had been revolving in his mind a method of tying the innominate artery, which he had had no opportunity of putting into execution. After exposing the vessel, he would place a strong silver wire loosely around it and fasten it. He then would introduce the forceps and flatten the loop from side to side, so as to bring the walls of the artery in contact and obliterate

its lumen. After hearing Dr. Senn's paper last year on the use of double ligatures, he believed that this would be an admirable way of tying the innominata.

Dr. Warren said that he would agree with what had been said, that the amount of thrombus and inflammatory products thrown out is in direct proportion to the amount of traumatism, but he doubted, even with antiseptic precautions, that one could get entirely rid of the external callus. In Lister's description of the organization of the clot after ligature of the vessels he alludes to the ring of new tissue supplying the place of the catgut ligature after it had been absorbed. Dr. Senn referred to primary union. In the speaker's first experiments he met some cases in which he thought that this had occurred, but careful microscopic study had shown that invasion of granulation-tissue had taken place from without.

With regard to the question of the closure of the vessel without injury to the intima, he quoted Cohnheim's experiments showing that as long as the internal tunic remains healthy the blood remains fluid, but as soon as it is injured a thrombus begins to form. In the Warren Anatomical Museum there is a specimen of a ligatured carotid artery in which no obliteration had taken place, the intima being uninjured; but the media and adventitia were softened by the invasion into their substance of new cells from the outside, which had not yet penetrated the uninjured intima. Under such circumstances aneurism or secondary hemorrhage might occur.

Referring to temporary ligatures and the use of catgut, he said that surgeons use silk and cotton thread, and cut them short, and do not expect to see them again; they become absorbed and disintegrated by wandering cells, and are therefore in the same class as the former.

With regard to the part played in healing of arteries by the muscular fibres, he said that these are not the striped muscular fibres, but the unstriped, which are closely allied to connective tissue. He cited the structure of granulation-tissue, in which new vessels are formed with muscular walls, and also referred to the immense development of new fibres in the uterine walls during gestation.

The question raised by Dr. Gunn as to the application of ligatures to large vessels is a very important one. The use of animal ligatures has been urged. The author of the article in Holmes's Surgery especially recommended the antisepticized ox-aorta ligature.

In reply to a question from Dr. Prewitt, he said that the clot is of great value where the vessel is large, because it protects the vessel from pressure during the first stage of healing.

In reply to a query raised by Dr. Moore as to the asserted conversion of catgut ligature into human tissue by Lister, he said that in the transactions of an English society he had seen a colored illustration in which this process was supposed to be going on, whereas it was as he had just described, and would serve as a very good frontispiece for the paper he had just read.

Dr. J. W. S. Gouley, of New York, read a paper entitled

SOME POINTS IN THE SURGERY OF HYPERTROPHIED PROSTATE.

After referring to the frequency of this condition, thirty per cent. of men over fifty years of age being subjects of it, according to Lessey's statistics, which he thought understated rather than overstated the facts, he also mentioned the elaborate studies of Mercier into the pathology of the prostate gland. The paper was divided into three parts: (1) the physical exploration, (2) medicinal treatment, and (3) surgical treatment.

He insisted upon the importance of physical exploration, especially by the conjoined method with a forefinger in the rectum and Mercier's short-beaked instrument in the bladder, or with a modification made by the author which permitted measuring the size of tumors of the bladder as well as enlarged prostate, and which he had named the "cystopylometer."

He had a poor opinion of medicinal agents in enlarged prostate, except as palliatives. Of the surgical methods he preferred Mercier's plan of tunnelling through the enlarged middle lobe of the gland, and exhibited the instruments devised for the purpose. Prostatectomy was merely mentioned. In regard to catheters he advocated a large size, soft, flexible, velvet-eye catheter, and exhibited a number of those which he considered unsuited. Intra-vesical injections are often of service to reduce attending cystitis. He gave the preference to nitrate of silver (gr. j to ʒj), and also to irrigation of the bladder with a large quantity of warm water. He had used cocaine solution when there was much pain. Where the bladder is contracted and micturition frequent, he advised training the patient to retain his urine, gradually increasing the interval, so as to stretch the bladder and increase its capacity. He suggested caution in emptying an over-distended bladder and in removing a large quantity of residual urine with the catheter, and advocated gradual evacuation by the removal of eight ounces of urine followed by the injection of four ounces of water containing boric acid; this to be repeated each day until the bladder can be emptied without danger of blood-poisoning, catheter-fever, and collapse.

To the operation of Mercier for the purpose of removal of portions of the prostate, he suggested that the name be applied of "internal prostatomy and prostatectomy."

In the discussion which followed the reading of this paper, Drs. Moore, Gunn, and

Prewitt approved generally of the views expressed by the lecturer. Dr. Gross exhibited an instrument devised by Reginald Harrison.

Dr. Gouley claimed, in conclusion, to be the first who had practised combined incision and excision of the prostate gland. He regretted that Harrison had not given him proper credit for it, although Mercier had acknowledged it.

At the beginning of the afternoon session, Dr. Ernst, of Boston, by special invitation gave a verbal report upon his studies with cultivation of disease-producing bacteria, explained the methods adopted, and exhibited specimens containing different micrococci. He insisted upon the importance of cultivation in order to bring into notice the individual distinctions, which are not always evident under the microscope.

Dr. Warren made some remarks upon the question of the connection between the appearance of germs in a wound and the course of inflammation. The method of Rosenbach makes the investigation easy. In a case of perinephritic abscess the pus, when cultivated in a pure culture, showed the Staphylococcus aureus. The patient died, and abscesses were found in the heart, liver, and lungs which also contained the same organism.

On motion of Dr. Gross, Dr. Ernst was requested to continue his investigations and present a report of the same at the next meeting of the Association.

An elaborate and extended series of papers, entitled

AN EXPERIMENTAL AND CLINICAL STUDY OF AIR-EMBOLISM,

were presented by N. Senn, M.D., but only read in part. The essay included sections on —1. The immediate cause of death by rapidly fatal embolism; 2. History of air-embolism; 3, Intravenous production of air; 4. Effect of the heart and respiration on the venous circulation; 5. Aspiration of air into the superior longitudinal sinus; 6. Experiments on same; 7. Practical suggestions concerning injuries of superior longitudinal sinus; 8. Immediate cause of death after intravenous insufflation of air; 9. Intra-arterial insufflation of air; 10. Clinical study of air-embolism, illustrated by cases; 11. Experiments on intravenous and intra-arterial insufflation of air; 12. Remarks on experiments; 13. Prophylactic and therapeutic recommendations.

Dr. Senn declared that air-embolism occurred as the rule where there had been previously a large loss of blood; that under ordinary circumstances the veins do not exert any aspiratory force whatever, except when their walls are held apart by tension of surrounding structures, or made permanently patulous by deposits in their walls. The entrance of air is favored by gravitation. In operating upon the longitudinal sinus no air entered while the animal was horizontal, but when the head was lifted the air entered with a lapping sound. Ligation of the longitudinal sinus is easily done, provided a sufficiently large opening be made for the manipulations required. In operations for removal of tumors, where there is a probability that this sinus will be opened he advocated its preliminary ligation as a routine practice. When the sinus is opened laterally and it is not convenient to apply a ligature, he recommended the introduction of a small piece of aseptic sponge. He had found the sponge becomes organized as in sponge-grafting elsewhere.

When death occurs from air-embolism, it is due not so much to plugging of the pulmonary capillaries as it is to anæmia of the brain and centres of respiration, as a result of cardiac paralysis from over-distention of the right side of the heart. A small amount of air can enter the circulation without any bad consequences being noticed. When a large amount of air enters and the heart stops from over-distention, he found that by aspiration of the right ventricle the air could be withdrawn and the heart resume its movements.

The discussion upon this valuable communication was postponed until the next day.

Third Day.—Dr. Warren complimented the author of the paper upon its comprehensive character, and agreed with his explanation of the cause of death being cerebral anæmia after air-embolism. This has been compared with fat-embolism, and it is known that in some cases fat-embolism may occur to a considerable extent without any symptoms whatever being produced. The observation is very interesting that an amount of air large enough to kill an animal if thrown in at one time may be given in divided amounts at short intervals without serious results, because in this way over-distention of the heart is not produced, although air-embolism must occur in the lungs and brain. With regard to the question of aspiratory force by the veins, he did not agree to its non-existence. It is likely to occur when there is much tension upon the vein, or when a large trunk or sinus is opened. He called attention to a source of mistake: in removing growths from the axillary space the respiratory movements of the thorax sometimes cause the air to rush into the axilla with a sucking noise, as if the axillary vein had been cut. He mentioned several cases of sudden death in Boston from entrance of air into the uterine sinuses during attempts at abortion.

Dr. Gordon, of Portland, Maine, by invitation reported a case of sudden death during attempted aspiration of a pelvic abscess. The cavity had been aspirated previously with no bad results. On this occasion the assistant reversed the aspirator undesignedly, and filled the receiver instead of exhausting it. When the needle was introduced as before, the young man turned the stop-cock, when immediately the patient screamed, placed her hand upon her heart, and died. It was sup-

posed that the air had entered one of the veins in the wall of the abscess. No autopsy was obtained, but he had no doubt that death was caused by air-embolism.

Dr. Nancrede referred to the fact that although Beauchesne, in 1818, had first recorded a fatal case of air-embolism during the removal of a cervical tumor, yet the elder Larrey is said to have frequently noticed this as a cause of death upon the field of battle in wounds of the neck. As regards the suggestions for treatment, he need hardly remind the Fellows that these results of experiments on animals are not conclusive as applied to human subjects. For instance, the calibre of the pulmonary capillaries is said to be much larger in the horse than in man and other animals, thus allowing freer passage of the frothy blood, which accounts for the fact that a much larger relative amount of air in the veins is required to kill horses than other animals. The cause of death in air-embolism is a complex one, but it ultimately results from arterial anæmia of the respiratory and cardiac centres, due to the lung-capillaries refusing passage to the bloody spume, and also to the fact that this frothy blood has not sufficient density to close the heart-valves. A singular observation bearing upon the former point is that an equal amount of water thrown into the circulation is said to produce symptoms identical with those of air. This can only be explained by the physiological fact that the capillary circulation is best carried on by a fluid of the same density as that of blood, and that its dilution interferes with its free passage through the vessels. This, together with the large size of the horse's capillaries, gives us a therapeutical hint presently to be enlarged upon. The position necessitated by the neck and arm in operations in those regions often temporarily canalizes the veins. The speaker then enlarged upon the conditions producing temporary canalization of veins, which had not yet been referred to by previous speakers. He did not agree with Dr. Senn that all cases were preceded by great loss of blood, and related a case of his own, of amputation at the shoulder-joint, where death had suddenly resulted from the entrance of the gaseous products of putrefaction, the result of sloughing in the wounds. Preventive measures are most available, as we can rarely be provided with an aspirator, even if inclined to puncture the heart, as the speaker was not. Complete anæsthesia, to prevent sudden inspiration, should be secured, or the chest enveloped in a binder where anæsthetic agents were not used. He always avoided incisions when the parts were on a stretch, in "the dangerous region," unless a finger was placed on the cardiac side of the wound, or the pedicle was clamped by some device like dressing-forceps.

Ligaturing, before cutting the deep attachments of a cervical or axillary tumor, was advised when they could not be twisted off. As to curative measures, he would recommend the surgeon to secure the vein at once, or, still quicker, fill the wound with water by a squeeze of the sponge, as suggested by Mr. Treves. As death results from syncope, lower the head, also divert the blood from the limbs to the brain by compressing the axillary and femoral arteries, and give cardiac stimulants to enable that organ to drive the blood through the obstructed lung-capillaries. Use atropia hypodermically to render the pulmonary capillaries as like to those of the horse as possible, by fully dilating them. First and last, keep up artificial respiration, which, as has been experimentally shown, can rid the blood of a considerable amount of air.

Dr. P. S. Conner read a paper on the

ETIOLOGY OF TETANUS,

in which, after reviewing the current views of pathology of this disease, and approving the distinction made by Collis between partial and general tetanus,—the latter only being regarded as true tetanus,—he suggested that the history pointed to a toxic agent existing in the wound, which was either of the nature of a chemical substance (a ptomaine, in fact) or bacterial. He discarded the idea of reflex irritation, and called attention to the fact that tetanus is most likely to follow injuries of nerves of greatest sensibility, which are known to be most liberally supplied with lymphatic vessels.

During the discussion, which was participated in by Drs. Moore, Nancrede, Prewitt, Mears, Tiffany, Prince, Watson, and Briggs, the great prevalence of tetanus from the toy-pistol was alluded to. It was thought to be due possibly to the chemical action of the fulminating powder, but Dr. Conner was of the opinion that it was principally due to the amount of laceration of the tissues caused by the disintegration of the charge.

Dr. Moses Gunn, in the absence of the author, read the paper of Dr. C. T. Parkes, of Chicago, on

A CASE OF CHOLECYSTOTOMY.

The patient was a woman 29 years of age, married, who had suffered for two years with frequent paroxysms of agonizing pain, accompanied by nausea and vomiting, and used large quantities of morphine. The symptoms pointed to occlusion of the common duct and distention of the gall-bladder. Cholecystotomy was performed, a quantity of mucoid bile-stained fluid was evacuated, but no stones discharged. The walls of the cyst were stitched to the wound, which had been made over the tumor. During the next few days a number of small calculi were found in the discharge from the wound. No high temperature, no vomiting or other disturbance, followed the

operation, which gave the greatest relief to the patient. As there was no appearance of bile in the stools, a second operation was performed four weeks later, in which the wound was enlarged and steel sounds introduced into the common duct, dilating it gradually. The fistula was then closed, and the patient recovered. Bile reappeared in the stools. The enlargement of the liver had rapidly subsided after the first operation. It was supposed that the stones had formed in the bile-ducts and were washed out by the flow of bile after the pressure was removed.

Dr. Mears recommended early operation. Operative procedures are called for (1) in cases of inflammatory conditions causing complete obstruction of the common duct; (2) where tumors press upon the duct, causing obstruction; (3) in malignant diseases of surrounding structures; (4) a condition of suppuration of the cyst requiring prompt evacuation; (5) the pressure of impacted gall-stones. The question of operation is affected by the diagnosis. Exploratory laparotomy has been urged in all cases, but this is an operation which should not be lightly undertaken. The point of operation is one of interest. The external incision may be made in the median line of the abdomen and directly over the growth. He preferred the latter, so as to favor the stitching of the cyst-wall to the wound and secure drainage, or permit of entire removal of the bladder if found advisable. He thought an opening rather lower down would be preferable to one immediately over the tumor.

Dr. Prewitt reported a case illustrating difficulty of diagnosis from the history. A man 70 years of age, who never had been sick previously, was taken with biliary colic and died in a state of collapse. The gall-bladder was found to be full of stones, which had given no symptoms during a long life. Death was caused by ulceration and peritonitis. He also spoke of mucoid distention of the gall-bladder, which may give all the symptoms of gall-stones and yet no stone be found. The diagnosis is often obscure. He cited a case in which a large gall-stone ulcerated through into the jejunum, and finally caused death by obstruction of the lower part of the ileum.

Dr. J. Ewing Mears read a paper on

PHOSPHOR-NECROSIS: ITS CAUSES, TREATMENT, AND PREVENTION, WITH REPORTS OF CASES.

After giving the clinical records of six cases of phosphor-necrosis of the jaw-bones, out of sixteen which had come under his care, the lecturer passed around specimens of bone removed, with photographs of the cases.

He then reviewed the literature of the subject, the clinical features of the disease, and the means to be adopted among the workers in match-factories for its prevention. The following are his conclusions:

1. That phosphor-necrosis of the jaws is the local expression of a constitutional condition produced by the inhalation of the vapor of phosphorus and by particles of the agent taken into the system with the food by operatives in match-factories who do not give proper attention to cleanliness of the hands.

2. That the introduction of the agent into the system is, as a rule, very gradual, and in such small quantities as to avoid the production of the symptoms of acute poisoning; that in this way a chronic toxic condition of the system is induced, characterized chiefly by disintegration of the red blood-corpuscles and fatty degeneration of the arterial coats.

3. That this toxic condition precedes the development of necrosis is shown by the fact that the disease does not attack operatives recently exposed to the action of the agent, but those who have been exposed for a period of years; also shown by the case reported in this paper in which the disease did not manifest itself until three months after discharge from the factory.

4. That examinations of the teeth of operatives have shown that many who have a condition of caries and that many who have returned to work immediately after the extraction of teeth have enjoyed immunity from the disease, showing that the agent has not attacked the periosteal tissues thus exposed.

5. That individuals vary in their susceptibility to the action of the poison, for this reason: many suffer immediately with symptoms of acute toxic condition, such as nausea, vomiting, etc., and are compelled to abandon work in the factories.

6. That the conditions under which the experiments were made on animals proving the absence of the disease until exposure of the periosteum and peri-alveolar tissues was effected were not similar to those to which operatives in match-factories are subjected.

7. That treatment of the disease in the primary stage in the manner outlined above is efficient in preventing its progress.

8. That the antidotal powers of turpentine have been established, both in neutralizing the effects of the poison upon operatives during their work and also in the treatment of the early stages of the disease.

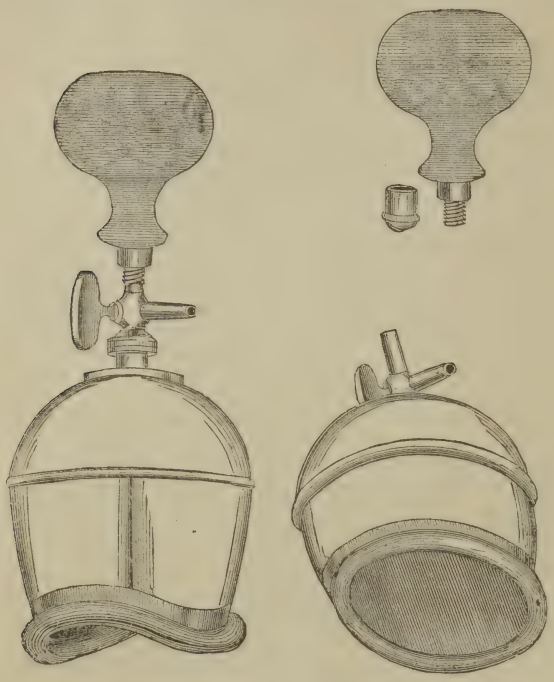
9. That the disease is to be prevented among operatives by the adoption of thorough methods of ventilation, stringent rules with regard to cleanliness, and the free disengagement of the vapor of turpentine in all of the departments of factories in which the fumes of phosphorus escape.

The paper was discussed by Drs. Moore and Nancrede.

NEW ETHER-INHALATION APPARATUS.

Dr. Mears also exhibited an apparatus for ether-inhalation made of metal, nickel-plated, dome-shaped, fitted to cover the mouth and nose, having at its upper portion a tube, closed

by a stop-cock, and communicating on the inside with a sponge. It was designed for continuous inhalation, the ether-reservoir being placed upon the upper portion of the tube, the ether to be admitted to the sponge by turning the stop-cock. The advantages claimed were continuous supply of ether-vapor, cleanliness, and simplicity. By attaching one end of a rubber tube to the reservoir (which is placed in hot water) and the other end to the inhaler, the instrument could be used for rapid etherization, as shown by Dr. Mears when exhibiting the apparatus.



MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A STATED meeting was held April 27, 1885, the President, DANIEL LEWIS, M.D., in the chair.

THE EFFECT OF SEA-VOYAGING UPON THE GENITO-UTERINE FUNCTIONS.

Dr. J. A. IRWIN read the scientific paper of the evening, with this title. Notwithstanding the importance of the subject, which was evident from the fact that serious disturbances of the genito-uterine function were liable to take place during a sea-voyage, and the great amount of transatlantic travel at present, very little was to be found in medical literature concerning it. The observations recorded in the paper were made during the author's service as ship-surgeon on the transatlantic steamers in 1879, 1881, and 1882, and also while he was acting in the same capacity on vessels destined to India and Australia.

During this service Dr. Irwin had records of one hundred and four pregnancies, eleven parturitions, three miscarriages, and four hundred and fifty-one observations upon menstruation, including many missed periods among women who were usually regular on land.

The author first took up the subject of the effect of a sea-voyage upon the menstrual function. Of the four hundred and fifty-one observations upon the menstrual periods of women while at sea, two hundred and eighty-eight were made under his instructions by a stewardess, and were replies received to formal questions, and he thought could be relied upon as accurate. All of the two hundred and eighty-eight women were supposed to be non-pregnant. Menstruation was normal previous to the voyage in all. Twenty-one of them passed the period while on board the vessel without menstruating, forty-three menstruated before the proper period, two hundred and twenty-four menstruated at the proper period, twenty-three complained of pain, and in a few instances there was increased flow, while two hundred and one of the women noticed absolutely nothing unusual which could be attributed to the voyage. Of Dr. Irwin's own one hundred and sixty-three observations among women of a higher social standing, thirteen passed the period on board without menstruating (of whom eleven experienced more or less molimen), fifty-one menstruated before the period, and ninety-nine at the period. Of these, forty-seven complained of unusual discomfort, accompanied in thirty-seven cases with increased and prolonged flow, and in two with diminished discharge. Of the thirteen who passed the period, three were still on board at the following period. One of the three then menstruated almost normally, in one the result was not known, and in the other the flow was increased in quantity and prolonged in duration, but she subsequently experienced complete amenorrhœa during two periods.

From these figures it would be seen that disturbance of the menstrual function at sea was of frequent occurrence. As to the explanation, it offered a question difficult to solve, and the more so because of the indefinite and conflicting views regarding the real nature of the menstrual function. Whatever might be the view entertained regarding the nature of menstruation, Dr. Irwin thought it

was evident there was during a sea-voyage a tendency to increased pelvic congestion, which would offer an explanation for the phenomena usually observed regarding the menstrual function.

As to the special conditions in an ocean-voyage which might be supposed to exercise an influence upon the female habit, they might be classed under three heads,—namely, physical influences, dependent upon the novelty of the situation and the apprehension of danger; second, aerial, consisting in some special quality of sea-atmosphere; and, third, motional, as a direct result of the movement of the vessel.

There could be no question that strong emotional impressions had some influence upon the menstrual function, but this influence was less marked than some believed in the class of cases under consideration. That physical influences did play some part in the disturbances of menstruation was quite probable in cases of sudden arrest of the flow in women who embarked during a period. But many women who suffered most severely during the sea-voyage had not the slightest fear, and would thoroughly enjoy sea-life but for its unpleasant effects on the menstrual function.

However acquired, sea-air possessed peculiar hygienic potency which had caused it to assume a most distinguished rank among the medicinal remedies of antiquity; but it was clear, however, that the chief influence brought to bear during an ocean-voyage upon the established habits of the economy arose from the motion of the vessel. Dr. Irwin then referred to his explanation of sea-sickness, described in a paper published by him in 1881, and which had come to be the generally accepted view of the cause of sea-sickness, or, more properly speaking, of motion-sickness. His view was that it was a form of Ménière's disease, consisting in a disturbance of equilibration, the initial lesion being situated in the semicircular canal. Whatever might be the direct cause, Dr. Irwin thought there could be no doubt that during a sea-voyage there was an increased blood-supply to pelvic organs, which might vary in degree from a slightly increased amount to a positive engorgement of the organs. That the sympathetic system was sometimes affected was unmistakable from the symptoms observed. The frequent dysmenorrhœa and the usual intensification of the symptoms of local pelvic disease were results which we would expect *a priori* from a hyper-congestion of the pelvic organs.

It would be seen that a sea-voyage might disturb the menstrual habit in every conceivable form,—in its periodicity, duration, amount of excretion, and discomfort. The particular effect most likely to occur would be determined by the constitutional habit of the individual, the relation of the last flow to the date of embarkation, and the length of the voyage and fortuitous conditions. With regard to periodicity, the most constant change was a premature return of the flow, and this return might take place at any time during the intra-menstrual epoch. If a woman go on a voyage shortly after the cessation of the flow, there would be liability to a renewal of the discharge or of the peculiar symptoms attending a period, and it might lead to suppressed menstruation at the next time it should come on.

Complete and passive amenorrhœa for one or more periods after a sea-voyage was a frequent result of the transatlantic voyage.

Of the effects of a sea-voyage upon menstruation, none was more constant or unfortunate than an aggravation of whatever discomfort was ordinarily associated with menstruation. In some women painful menstruation was experienced for the first time at sea; and it might be accepted as almost universally true that in every type of dysmenorrhœa the discomfort was increased, certainly at the first, and usually at subsequent periods, at sea. If there were any exceptions to this rule, they would be found in certain neurotic states. Dr. Irwin then offered some possible explanations of the aggravation of dysmenorrhœa during a voyage, reasoning from the theoretical explanations which had been offered regarding the menstrual process.

Puberty was sometimes hastened by a voyage at sea, and the flow sometimes recurred at the climacteric period. The aphrodisiac influence of a sea-voyage was generally recognized, and would be expected to occur under conditions which increased the pelvic blood-supply.

An ocean-voyage should be regarded as a potent emmenagogue, having in addition to the special quality a well-marked tonic, alterative, and sedative influence. But it should no longer be prescribed empirically, but with a definite object in view. There were many cases in which its local as well as its constitutional influences would be indicated,—for instance, in certain conditions of chloranæmia, amenorrhœa with pain, and retarded sexual maturity, certain forms of leucorrhœa and uterine hysteria, and lack of development in school-girls, a typical case of which had been described by Dr. Emmet.

It would of course be understood that upon the large majority of women who crossed the ocean the sea-influence was too slight and too transient to be considered of serious import. There were, however, many conditions of the uterine organs which, if not positively interdicting a sea-voyage, did demand special prophylaxis and skilful attention on board. Dr. Irwin was inclined to think that almost every form of uterine and ovarian disease became worse while at sea, and he did not think that the possible reactionary beneficial results would justify one in sending such

women to sea. Uterine displacements were especially liable to give trouble.

The treatment of uterine troubles during ocean-transit should be conducted upon general principles.

The influence of sea-voyaging upon utero-gestation was a subject which was of the greatest importance. The influence of sea-sickness and the mechanical disturbance of the viscera, and especially of prolonged and violent vomiting, was to cause premature labor and miscarriage. The vomiting of kinetia was not to be compared with that of morning-sickness in its effects upon pregnancy. It was more violent and more liable to cause miscarriage. It was the author's opinion that pregnancy, especially during the latter months, predisposed to and aggravated the most distressing features of sea-sickness.

It had also been noticed that ocean-voyages perverted or suspended lactation.

DISCUSSION.

Dr. C. C. Lee. Mr. President and gentlemen: I had not the advantage of hearing the earlier part of Dr. Irwin's paper, but I am somewhat familiar with his views, partly through his kindness in allowing me to know the general line of thought he was about to adopt. Although my own experience of sea-life as affecting patients, particularly patients suffering from uterine disorders, has been limited in comparison with the author's, I have the highest pleasure in concurring in the main with everything I have known Dr. Irwin to advance. In the first place, as to congestive conditions, I have never known an exception to the general rule that when women are sick at sea for the first time, or are liable to be very sea-sick, the constant straining of the vomiting or the general derangement of innervation—which, according to Dr. Irwin's views, is the underlying and essential cause of sea-sickness—causes increased pelvic congestion and increased tendency to metrorrhagia or menorrhagic flow. I have seen on several occasions, and I could recall at this moment as many as four or five pregnant women, patients of my own, upon European voyages, and I have not known a miscarriage to follow. These patients were all at different stages of utero-gestation.

I have never had any experience in the effect of sea-sickness upon amenorrhœic women as to its tending to bring on the flow, or as to its tendency to overcome amenorrhœa; nor have I, in my limited observation, ever seen persons suffering from chlorosis or amenorrhœa benefited in the slightest degree by a sea-voyage. I think, sir, we are all apt to be influenced by our own sensations of pleasure or discomfort during a sea-voyage regarding its effects upon others, and I may express my feelings as being emphatically those of discomfort during a voyage at sea, having made ten voyages across the Atlantic, and having been constantly sick, and seen every one around me completely sea-sick. Consequently, I cannot well believe that such a life during short transatlantic voyages can possibly exercise a beneficial influence upon the more delicate organization of chlorotic women. I can perfectly understand that long voyages—those around the Cape of Good Hope, or to China, or Australia—could be beneficial in other conditions of ill health, where there was pulmonary trouble or general nervous prostration, in which a change of climate and the change of sea-life had been indicated. But I know of no condition of chlorosis or of anæmia in women, or of conditions that lead to amenorrhœa, which would be likely to be benefited by a short sea-voyage, such as we are in the habit of recommending to our more wealthy class of patients, sending them from here to Europe in the hope of benefiting their health. I think, as a rule, physicians commit no greater mistake than in supposing (which is not unusual) that a sea-voyage will benefit almost everybody who wishes a change. When in my earlier practice I sent amenorrhœic patients or those suffering from uterine disorders on a sea-voyage, I was invariably disappointed in obtaining the benefits which I had expected. Amenorrhœic and chlorotic patients are too short a time at sea to become accustomed to the motion of the vessel and to overcome the tendency to sea-sickness. Patients suffering from displacement of the uterus, or habitual congestion of the pelvic organs, or constant metrorrhagia, always, when in my earlier professional life, before I learned better, I sent them on a sea-voyage, disappointed my expectations and were made worse by the voyage. I judge this effect to be due to the prostration and exhaustion of the nervous system and the relaxation of the muscular system which is caused by excessive sea-sickness, rather than to the influence of the sea-air or change of habit and food or other conditions attending the voyage.

To sum up my experience in a few words, I would say that long sea-voyages may justly be expected to benefit that class of women who are either delicate, feeble in organization, or chlorotic; that long or short sea-voyages may alike be expected to prove injurious to persons of plethoric habit, or who, either from displacements of the uterus or previous conditions of perimetritis, or uterine tumors, or from habit, have been subject to metrorrhagia or menorrhagic flows.

I will not detain the Society longer, Mr. President, but will give place to those who are better able to discuss the paper.

Dr. B. F. Dawson said his experience had been limited in the class of cases treated of in the paper. He had seen only one case of excessive menstrual flow at sea, but had seen three or four cases of amenorrhœa in women who usually menstruated normally and regu-

larly. In these cases sea-sickness could not have played any part in the production of the amenorrhœa, as the women experienced no trouble in that direction from the voyage. But emotional influences, the separation from their families, and fear of the ultimate result of the voyage, probably caused the absence of the flow.

Dr. JOHN DWYER had been physician on board a sailing-vessel about thirty years ago, and it was common for mothers to bring their young daughters to him because of absence of the flow. He was unable to give remedies which proved of benefit. He had observed the marked aphrodisiac influence of an ocean-voyage upon all classes of people.

Dr. A. M. JACOBUS had seen a number of cases of amenorrhœa following a sea-voyage, and believed it was not an uncommon occurrence for the menses to cease for a number of periods after a voyage across the ocean. He had obtained little benefit from treatment.

Drs. MCLAURY, BARUCH, LAURENCE JOHNSON, BRACKLOW, and BUTLER had also seen a number of cases of amenorrhœa following a sea-voyage. Dr. Butler referred to one case in which menstruation always took place normally while the patient was at the seaside, but dysmenorrhœa existed during her residence in the city.

Dr. IRWIN closed the discussion, and was glad to know that his experience was in general confirmed by that of other physicians present.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held April 8, 1885, JOHN A. WYETH, M.D., President, in the chair.

Dr. NORTHRUP, for a candidate, presented

CYSTIC KIDNEYS, WITH DILATED URETERS.

BAYBERRY TALLOW AS AN EMBEDDING MEDIUM.

Dr. W. M. CARPENTER called the attention of the members to a new method of embedding tissue preparatory to microscopical work. Various substances were in use, such as celluloidine, paraffine, etc., all of which had their advantages and their disadvantages. That used at the laboratory of the University Medical College by Dr. Miller and himself was bayberry tallow, a substance which was not soluble in alcohol at ordinary temperature, but was soluble in warm alcohol and in some other substances. The piece of tissue taken from alcohol was immersed in melted bayberry tallow and allowed to remain about fifteen minutes, by which time the tallow would have permeated the tissue completely. Dr. Miller's method was then to place the piece of tissue upon a piece of cork, where it remained until it became cool. It was then sealed fast to the piece of cork by more tallow or by paraffine, when it was ready for section. After the sections had been made, the bayberry tallow could be taken out of the tissue in either of two ways. First, by putting into warm—nearly boiling—alcohol, which readily dissolved it. It was then ready to go through the ordinary processes for permanent mounting. Benzol might be employed instead of alcohol, but care should be exercised in the use of either of these agents not to raise the temperature to a degree of combustibility. The advantages in the use of bayberry tallow were that the substance was very cheap; little time was consumed in preparing the specimen; it enabled the operator to make the sections with great precision; it could be removed thoroughly and easily from the tissues.

Dr. Carpenter then exhibited under the microscope a section of a bronchial tube prepared with bayberry tallow.

Dr. PRUDDEN thought the method described by Dr. Carpenter would prove of much practical value.

EXSECTION OF THE TIBIA.

Dr. WAGENHEIMER presented a part of the upper portion of the tibia of a child now three years of age, exsected for necrosis following an injury. When Dr. Wagenheimer was called to see the patient in consultation, he found two sinuses on the upper third of the anterior surface of the tibia, leading down to dead bone in different directions, and when he came to perform exsection the disease was found to be extensive, involving also the knee-joint. The wounds were dressed with iodoformized gauze, a drainage-tube introduced, and reproduction of the bone took place, leaving a leg capable of flexion to 45°, and of full extension. The degree of shortening was only half an inch.

NECROSIS OF THE FEMUR.

Dr. WAGENHEIMER also presented some small pieces of necrosed bone removed from the femur of a man at the situation of Hunter's canal. The patient recovered, with a useful limb.

Dr. VAN GIESON inquired whether in the latter case there was any hemorrhage.

Dr. WAGENHEIMER replied that there was not.

Dr. VAN GIESON said that in such cases hemorrhage was not infrequent, and it sometimes proved fatal. He had recently had a case similar to the one related by Dr. Wagenheimer, the patient having entered the hospital on account of hemorrhage, and examination showed that a spicula of bone had penetrated a large muscular branch. It was removed, the wound cleansed, and the patient recovered.

EXTRA-CAPSULAR FRACTURE OF THE HEAD OF THE FEMUR; THROMBOSIS OF THE LEFT MIDDLE CEREBRAL ARTERY.

Dr. L. E. HOLT presented a specimen of extra-capsular fracture of the femur taken from the body of a lady 73 years of age.

The patient had been perfectly well until she slipped, fell upon the floor, and was unable to rise. There was complete disability of the left lower limb, considerable swelling about the trochanter, and a great deal of tenderness. A satisfactory examination could not be made, but it was evident that there was some shortening, afterwards shown to be one inch. Four days after the accident the woman became unconscious. There was hemiplegia on the right side. The pupils were contracted equally. The patient remained comatose, and died seven days after the fall. At the autopsy he found thrombosis of the middle cerebral artery of the left side. All the cerebral arteries were markedly atheromatous, and there was atheroma of the aorta. The heart was fatty, the kidneys granular.

The specimen presented was interesting in two or three respects. First, the angle formed by the junction of the neck and head with the shaft of the femur approached less nearly a right angle than one would expect to find in a woman aged seventy-three years. The angle was about 120°. The fracture was extracapsular, the line of the fracture following the usual direction. The lower portion was impacted more than the upper. The angle after fracture was 110°.

GUNSHOT-WOUND OF THE HEAD.

Dr. Van Gieson presented bones of the cranium, the seat of gunshot-wound, removed from the body of a woman 39 years of age, who in the winter of 1884, during an attack of delirium due to typho-malarial fever, shot herself twice in the head, near the junction of the frontal with the parietal bone on the left side, the pistol being a thirty-two calibre. When admitted to the hospital, two wounds of the soft parts were found in the region mentioned, situated about an inch and a half apart. The probe introduced into the openings came down upon a bullet. Both tables were fractured, and the dura mater could be felt. Subsequently hernia cerebri formed, and about two months after receipt of the injury exfoliation of bone took place, which continued until September, 1884, when the wound entirely healed. From this time on the patient had frequent attacks of pain, starting from the point of injury and running to the back of the neck, but the pain was not sufficient to prevent her from doing work about the wards. She was sometimes "queer," and very stubborn, those being the only symptoms which seemed to be referable to the injury of the brain. Three weeks before death, acute rheumatism, with pericarditis, developed. Death took place in March, 1885.

At the autopsy the body was noticed to be well nourished. The meninges were thickened, congested, and new connective tissue was found at the gunshot-wound. There was adhesion of the brain to the dura mater, and of the dura mater to the skull. The brain around the gunshot-wound was in a state of yellow softening. At the junction of the left frontal and parietal bones was a round hole penetrating the skull, and near the upper inner margin of the hole were several pieces of lead, two of which were embedded in the bone. A negative point of interest in the case was the fact that, although the injury was near the centre of speech, there was no symptom of aphasia.

DRY GANGRENE OF THE FOOT FOLLOWING INJURY OF THE LEG.

Dr. Van Gieson also presented the leg, amputated for gangrene of the foot following an injury. The patient was a man 29 years of age, a brewer, who, while at his work, sustained an injury by a barrel of about one hundred and eighty-five pounds' weight falling upon him, first striking his head, and then the lower third of the thigh. When he entered the hospital there was found contusion of the left eyebrow, loss of the incisor teeth, fracture of one rib on the right side, and dislocation of the thigh backward at the knee. The head of the tibia and the patella constituted a marked prominence anterior to the condyles of the femur. The quadriceps extensor femoris was very lax, and the tendon could be grasped and moved from side to side. The leg was shortened about one and a half inches. The foot turned inward. The dislocation was reduced by the house surgeon, who partially flexed the thigh, made extension upon the ankle, and after a little manipulation the bones assumed their normal relations. There had been interference with the circulation, and paralysis existed. It was evident from the movements which could be made after reduction that there had been considerable laceration of the ligaments. The treatment was by posterior and lateral splints, and ice-bags to the knee. But the circulation in the foot remained poor, and by March 22 there was dry gangrene of the foot and blackening of the tissues above the malleoli. The leg was then amputated at the knee. Injection of the arteries failed to reveal the exact location of the obstruction, but it probably existed in the anterior tibial artery. The propriety of amputating at the knee instead of just above the line of demarcation was considered. An abscess which was found in the popliteal space would have contra-indicated amputation at the lower point.

TUBERCULAR LARYNGITIS.

Dr. H. J. Boldt presented the larynx removed from the body of a man 55 years of age, the seat of what appeared to be tubercular ulcers, but a microscopical examination would have to be made to settle this question definitely. There were tubercles in the lungs.

INTESTINAL INTUSSUSCEPTION.

Dr. J. Lewis Smith presented the intestines removed from the body of a child six months

old. The patient was artificially fed, and had for several weeks prior to its last illness suffered frequently from what was supposed to be intestinal colic due to abnormal adhesions. Eleven days ago it began to vomit, and to have more intense pain than previously. Dr. Smith saw the child the following morning, and again in the afternoon, when the nature of the disease was recognized as intussusception. There had been no movement of the bowels during the day, excepting the escape of a few drops of blood. An enema of tepid water washed away some fecal matter stained with blood. The attacks of pain occurred at short intervals. Dr. Smith remarked that the majority of cases of intussusception occurred in children aged between six and eleven months. The characteristic signs were present in this case,—namely, frequent vomiting, severe abdominal pain, constipation, and the discharge of pure blood per anum. Large clysters of tepid water were employed, the head dependent. No abdominal tumor could be felt. The distention of the gut with water was repeated several times on the second and third days of the disease, and on the third day laparotomy was proposed, but rejected by the parents. The next day, however, they changed their minds, and Dr. Sands saw the patient, prepared to do laparotomy. The abdomen was much distended from the accumulation of water below the obstruction and of fæces above, so that no distinct tumor could be made out; and as some fecal matter came away on the examiner's finger, Dr. Sands concluded not to operate. The child died rather suddenly twelve hours later. At the autopsy the invaginated portion of gut lay under the liver, the left extremity being in the median line, and deeply situated. As in most cases of intussusception, the lower portion of the ileum had entered the colon. It would seem that the injections of water had partially reduced the invagination, and it was not impossible that the more persistent employment of the treatment might have entirely relieved the condition. In several cases in which there existed symptoms of intussusception Dr. Smith had succeeded in curing the patients by this mode of treatment.

Dr. NORTHRUP remarked that he had often reduced the invaginated portion of gut frequently seen at autopsy by allowing a stream of water to enter the intestine through a rubber tube.

Dr. HOLT had recently read an article in one of the British medical journals, in which the author took the ground that if injections failed to reduce the intussusception by the second or third day they should be discontinued, as being liable to cause rupture, and laparotomy should be resorted to. Dr. Holt had observed at autopsy rupture of the gut produced by traction in reducing the invaginated portion.

The PRESIDENT would resort to laparotomy within twelve or twenty-four hours after the development of symptoms of intussusception, although the diagnosis were not very positive.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a meeting held February 25, 1885, Dr. R. J. Levis, President of the Society, in the chair, Dr. J. H. Musser read a paper entitled "A Report of Three Cases of Idiopathic Anæmia." (See page 601).

DISCUSSION ON ANÆMIA.

Dr. F. P. Henry said: I was glad to notice that Dr. Musser used the term idiopathic anæmia, instead of the term pernicious anæmia. This latter term, as well as the term progressive pernicious anæmia, is misleading, for, as Dr. Musser remarks, although the disease is frequently pernicious, yet it is not always so. Of late years recovery has frequently been recorded, especially under the use of arsenic, which was first employed in the treatment of this affection by Dr. Byrom Bramwell, in three cases, all of which recovered. The first case reported by Dr. Musser was marked by the predominance of nervous symptoms, especially towards the close of the case. The autopsy was very thoroughly made, but I notice that the brain was not examined. The eye-ground was examined and hemorrhages noted. Next to the retina, the most frequent seat of hemorrhage is the surface of the brain, and the inner layer of the dura mater or the parietal arachnoid, as it is called. Hemorrhages were also noted in other parts of the body, and it is fair to presume that there were petechial hemorrhages on the brain-surface. There was also noted the evidence of the existence of a suppurating gland which may have been strumous or syphilitic. There had been one miscarriage, I believe.

The second case greatly improved, or entirely recovered, under the use of a mercurial. Of course there is a possibility of syphilis, although I do not question that these three cases presented by Dr. Musser were genuine: certainly the first one was.

Although he did not observe in any of these cases enlargement of the red corpuscles, this has been frequently noted. The enlargement has been so marked that the term "giant" has been applied to them. Their diameter has been noted at fifteen micro-millimetres, while the average diameter is only eight and a half micro-millimetres. This increase is not limited to isolated corpuscles, but is general, and has been studied by many observers, particularly by a recent one, Laache, a German or Swede. This writer has called attention to the fact that the amount of hæmoglobin in the blood is not diminished in proportion to the diminution of the number of red corpuscles, so that the average value of hæmoglobin in each corpuscle is greater than normal.

This is a peculiar fact, and is not noted in any other form of anæmia. This observer also noticed an increased amount of urea in the urine, and also the presence of peptones.

I suppose that the cases reported by Dr. Curtin are cases of idiopathic anæmia. They have all the symptoms, but at the same time there were no autopsies, and in none of them was the blood examined, and therefore they are to a certain extent imperfect. Shock may undoubtedly produce this disease, and perhaps does so indirectly by interfering with digestion. I should imagine that those cases presented in some respects the condition of slow starvation. The depression of appetite may have caused the anæmia, which, lasting so long, led to degenerative changes in the gastric tubules, which changes are common in idiopathic anæmia.

This is an exceedingly obscure affection, and it has even been stated that the only sure diagnosis of idiopathic anæmia is to be made by the autopsy showing that no organ of the body is affected. This, I think, is wrong. It seems to me that there must be some lesion of hæmatopoietic organs yet to be discovered.

I may here remark in regard to the increased size and altered shape of the corpuscles being pathognomonic, that I have observed the same thing in a case of anæmia splenica. The patient died, and the spleen was found to be greatly enlarged and almost diffluent. These cases of pseudo-leukæmia, anæmia lymphatica, myelogenic anæmia, and pernicious anæmia, are not now clearly distinguished one from the other. The only way to separate them is by such careful study as has been bestowed upon the cases reported this evening.

Dr. Edward T. Bruen: Last year I had under my care a case of anæmia, of which the following is a brief account: S. F., aged 40, was of rather dissolute habits, but there was no reason to suspect syphilis. The blood was counted February 1, 1884, and showed a reduction of the red corpuscles to 600,000 per cubic millimetre; the white were somewhat reduced, but not to a marked extent; most of the red corpuscles were larger than normal, some of them being as large as the white; some were very small; all were highly colored, and many were of irregular shape and tailed. She was put under treatment, and some two months later an examination showed the same general appearances, but the red corpuscles were increased to 1,305,000 per cubic mm.; the patient subsequently had a relapse, and died about the 1st of June. I made an autopsy, and found, as had been recognized before death, that the spleen was much enlarged and very soft and diffluent; the other organs of the body were nearly normal, showing only the fatty degenerative changes which would be expected in a patient suffering several months with a severe form of anæmia.

The corollary which I feel disposed to draw from this case is somewhat in the line of the remarks of Dr. Henry; I think that we should not decide positively that the diagnosis of so-called pernicious anæmia can be made by blood-counting alone, or by the exclusion of definite lesions of the spleen and lymphatic glands. In the case that I have reported, there were the appearances of essential pernicious anæmia, yet the spleen was decidedly affected, while the marrow of the bones was normal. I think that possibly we should consider all these forms of anæmia as associated with lesions of the lymphatic structures or those structures which have to do with hæmatosis, and are all strictly idiopathic. I am not aware that any distinct pathology has been assigned to leucocythæmia, a disease which apparently presents the greatest possible contrast to pernicious anæmia. The positive nature of pernicious anæmia should be considered an open question. If I heard Dr. Musser correctly, he did not find those changes in the size and shape of the red corpuscles which occurred in the case I described.

The examinations of the blood, the results of which I have given, were made by Dr. William E. Hughes, to whom I am indebted for the report, although I examined the blood with him on several occasions.

Dr. Musser: As remarked by Dr. Henry, I purposely called the disease idiopathic anæmia, because cases are often cured, especially since the introduction of arsenic in its treatment; therefore, these cases are not pernicious, neither are they progressive, even fatal cases being characterized by remissions.

There is nothing so difficult as the distinction of idiopathic anæmia during life, for all the symptoms which it presents may be seen in other forms of anæmia. Immerman thought that the fever was pathognomonic, and called it essential febrile anæmia, but fever is found in other forms of anæmia, and many cases of pernicious anæmia without fever have been reported.

Attention was called to the occurrence of retinal hemorrhages by Biermer, but they occur in many forms of anæmia. There is probably only one symptom which is more frequently present in this than in other forms of anæmia, and that is the want of emaciation. This observation was first made by Addison, and has frequently been repeated by others.

In regard to the examination of the blood, various changes are found. By some, the presence of microcytes has been considered pathognomonic, but these are present to a moderate extent in health, and also in other diseases. In the same way, enlarged red blood-cells have been found in other conditions as well as in idiopathic anæmia. The evidence obtained from examination of the blood is not sufficient to warrant us in pronouncing any case an instance of idiopathic

anæmia. There must be an absence of any lesion to account for the profound degree of anæmia.

The remarks made by Dr. Curtin as regards the influence of the nervous system in the causation of this affection were warmly supported at one time by Lepine, who held that the nervous system was functionally at fault. Other observers have taken up the subject, and many facts have been brought to light to establish this point.

There is no doubt that there is an essential destruction of the red blood-corpuscles. In the absence of evidence of disease of the blood-making organs, Lauder Brunton has suggested, in an article in the *Practitioner*, that possibly the condition is due to a ferment circulating in the blood. This seems at least plausible, when we remember the effects of ferments on the red corpuscles. In examining the literature of acute yellow atrophy of the liver, I was struck with the fact that the changes in the blood were similar in most respects to those seen in anæmia. We shall have to fall back on chemistry to throw light upon this subject, especially as there are some cases in which there is no disease of the blood-making organs.

The value of arsenic cannot be too strongly impressed on the profession. Pye-Smith has written a most elaborate article, which will be found in Guy's Hospital Reports for 1883, in which he analyzes one hundred and twenty-three cases. Of these, twenty were cured. Puerperal and myelogenic anæmia, pseudo-leukæmia, and other forms of anæmia were excluded. Most of the cases that recovered were treated with arsenic, but transfusion was employed in four or five cases.

Dr. Roland G. Curtin: In answer to the suggestion of Dr. Henry that the cases which I have reported might have been instances of slow starvation, I would say that the anæmic symptoms preceded the dyspeptic troubles, and, further, that the patients were fully as rotund afterwards as before the anæmia set in. These facts would, I think, go to show that death was not attributable to starvation.

MISCELLANY.

The Illinois State Board of Health and Preliminary Medical Education.—At the annual meeting of the Illinois State Board of Health, held April 16, the subject of medical education was taken up. It was stated by the Secretary that although seventy-eight medical colleges out of the one hundred and sixteen in the United States claim to have exacted, at their last session, a preliminary-education requirement as a condition of matriculation, the evidence afforded by the applications thus far received goes to show that in too many cases the standard of such education must be very low. From the graduates of one college, which announces that a preliminary examination will be held in accordance with the rules of the State Boards, five out of the seven applications received gave such intrinsic proof of defective preliminary education that they were presented to the Board. The Board subsequently adopted the following resolution:

"*Resolved*, That, in order to secure the recognition of its diplomas as in good standing for the purposes of the Medical-Practice Act in this State, it is necessary that each college shall distinctly state in its annual announcement that the conditions of admission to its classes are: 1. Credible certificates of good moral character. 2. Diploma of graduation for a good literary and scientific college or high school, or a first-grade teacher's certificate. Or, lacking this, a thorough examination in the branches of a good English education, including mathematics, English composition, and elementary physics or natural philosophy."

The Use of Coca Wine by Invalid Travellers.—Dr. W. Thornton Parker, in a contribution to the *Archives of Medicine*, October, 1884, speaks highly of coca as a nerve-tonic for invalids, especially desirable for the invalid after reaching either Colorado or New Mexico. Coffee and tea are too stimulating, and exert an injurious influence on the nervous system in the high altitudes. Coca wine is desirable as a sedative to the nervous system, and is at the same time a delicious, invigorating tonic. He uses the wine made by T. Metcalfe & Co., Boston, which he considers "the best single preparation for travellers" that he knows of.

University of Pennsylvania.—The one hundred and eleventh annual commencement of the Medical Department was held on Friday, May 1, when the degree of Doctor of Medicine was conferred upon a class of one hundred and eight graduates, and that of Doctor of Dental Surgery was given to forty-nine. The valedictory address was delivered by Prof. D. Hayes Agnew.

The annual meeting of the Association of American Medical Editors was held in the hall of the Tulane University on April 27, the evening before the meeting of the American Medical Association. Dr. Henry O. Marcy, of Boston, Massachusetts, President of the Association, delivered an address on the "Legislative Establishment of Medical Examining Boards in America."

Jefferson Medical College.—It is announced that Prof. W. H. Pancoast has tendered his resignation from the Chair of Anatomy, but as yet no action has been taken upon it by the Board of Trustees. The Faculty has discontinued the Post-Graduate Course.

THE *Atlanta Medical and Surgical Journal*, which appears this year in greatly improved dress, announces in the May issue that it is the official organ of the Medical Association of Georgia, which has discontinued publishing its proceedings in book-form.

THE PENNSYLVANIA STATE MEDICAL SOCIETY will meet at Scranton on May 27, and remain three days in session.

PENNSYLVANIA DENTAL COLLEGE.—Dr. A. P. Brubaker has been elected to the Chair of Physiology in the Pennsylvania Dental College.

NOTES AND QUERIES.

RÖTHELN.

WASHINGTON, D.C., April 25, 1885.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

There is quite an epidemic, or at least a wide-spread prevalence, at this time in Washington of rötheln, or "German measles." It is so general that almost all the schools, both public and private, have had numerous absentees on account of it. Parents, as a general thing, regard it as a trifling disorder, and allow their children full liberty, and in many cases permit them to go out with the eruption on them, while others seem rather to invite it, thinking it very fashionable to have it.

From what I learn, it is popular to call it roseola, which leaves the impression on the mind of the public that it is a very mild affection, necessitating no safeguards or precautions, requiring no treatment, and making it hardly necessary for the patient to keep his bed or even the house. From this cause I think the disease has been more widely spread.

I have seen some severe cases, attended by high fever, highly suffused and injected eyes, with photophobia and severe sore throat; and I ascertained at the Health-Office—the office of Vital Statistics—that three deaths have been reported from this cause.

The symptoms presented in most of the cases in this epidemic are usually those resembling measles, though the catarrhal symptoms are not so prominent in most cases. In the incubation-stage the patient generally complains of weariness and headache,—the latter symptom is almost universal, and is peculiar to it,—and in school-children, inability to study. In the prodromal stage there is in the beginning sometimes chilliness, often amounting to slight rigor. The stadium eruptionis begins about the third day. At this period it is sometimes scarcely to be distinguished from genuine measles, while at others it has the character of a more diffused rash, with the exception of irregular elevations of the dermic tissues, and an occasional elevated red spot, with scarcely a line of the skin of the natural color between. The stadium efflorescentiæ lasts about two days.

There is always an exacerbation of fever at the time of and increasing up to the height of the eruption, and declining with it. It occurs occasionally that the fever can only be ascertained by the thermometer-readings, the pulse being scarcely above normal. In most cases I have seen, the eyes are intensely red and injected, with inability to bear the least light, the face puffed and swollen, the throat very red, and the tonsils so enlarged as to interfere with deglutition. In one or two cases in females there were violent cramps in the lower part of the abdomen, like uterine colic.

The disease attacks all ages from three years to twenty and over. I have had several in adult patients, but the majority of the cases occur in children between the ages of three and fourteen years. I have seen but one case in an infant

It generally lasts in favorable cases from five to seven days, and ends in desquamation more or less distinct. It is decidedly contagious in the febrile, and more especially in the desquamating, stage. The treatment is mostly expectant, but frequently decided treatment has to be instituted.

Rötheln is supposed to be a hybrid of scarlet fever and measles,—scarlet fever *plus* cough, hoarseness, and lachrymation (symptoms of measles), due to the presence of the eruption on the mucous membranes (Hooper).

Niemeyer speaks of rubeola scarlatinosa, and under the heading "Rose-rash" (roseola febrilis), says, "Canstatt aptly defines rose-rash as an eruption with red spots, concerning which, from its general symptoms and the affections of the mucous membranes, we are in doubt whether it should be classed with scarlet fever, measles, urticaria, or erythema, as it resembles one or other of these diseases in some points, while it differs in others. Epidemic roseola arising from infection . . . from unknown causes consists in modifications of scarlet fever and measles." The differential diagnosis between rötheln and roseola seems to be plain.

Scarlet fever and measles have been lingering to a greater or less extent in Washington during the later winter and spring months. There has been quite a number of malignant cases of the former, though the mortality has not been large. According to the official monthly report of the health-officer of this city, there were in November, 1884, eight deaths from scarlet fever, or 48 in 1000 of population per annum. In December there were 16, or 96 in 1000 of population per annum. For January, 1885, 13 deaths, or 78 in 1000 per annum, and in February 13, or 78 in 1000 per annum. During the period mentioned there were no deaths reported from measles.

Many of the cases of rötheln that came under my observation had had either scarlet fever or measles, and some had had both. There was a case in my own family where the patient had had both scarlet fever and measles in a typical form, and yet she had rötheln quite severely. In this case it was very much like measles, and if I had not known she had gone through with that disease I should have unhesitatingly pronounced it measles, especially if she had had the faucial and laryngeal irritation and cough usually observed in measles. She had measles *minus* cough, though she had quite a sore throat.

Is rötheln, then, a hybrid of scarlet fever and measles, or is it a distinct disease? May it occur at any period, or does it usually follow periods of epidemic or endemic scarlet fever and measles, or is it in any way associated with or related to them? These are questions that have not been decided, and yet they are worthy of investigations which will tend towards a solution of the problem.

S. J. RADCLIFFE, M.D.

1211 F STREET, NORTHWEST.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 26, 1885, *TO MAY* 9, 1885.

MAJOR JOSEPH H. BILL, SURGEON.—Ordered for duty as member of Army Medical Examining Board, New York City.

CAPTAIN WILLIAM G. SPENCER, ASSISTANT-SURGEON.—From Department of the East to Department of Dakota.

CAPTAIN LOUIS BRECHEMIN, ASSISTANT-SURGEON.—From Department of the East to Department of the Platte.

CAPTAIN WILLIAM B. DAVIS, ASSISTANT-SURGEON.—From Department of Dakota to Department of the East. S. O. 100, A. G. O., May 2, 1885.

MAJOR CHARLES C. BYRNE, SURGEON.—Assigned to duty as attending surgeon at the Soldiers' Home, District of Columbia, to take effect May 15, 1885.

CAPTAIN CALVIN DE WITT, ASSISTANT-SURGEON.—Upon being relieved by Surgeon Byrne, ordered to report to the Surgeon-General of the Army. S. O. 94, A. G. O., April 25, 1885.

MAJOR GEORGE M. STERNBERG, SURGEON.—Detailed to attend as a delegate, on the part of the Government of the United States, the Sanitary Conference to be held at Rome, Italy, on May 15, 1885. S. O. 103, A. G. O., May 6, 1885.

CAPTAIN STEVENS G. COWDREY, ASSISTANT-SURGEON.—Assigned to duty as post-surgeon, Fort Bliss, Texas. S. O. 65, Department of Missouri, May 2, 1885.

CAPTAIN GEORGE H. TORNEY, ASSISTANT-SURGEON.—Assigned to duty at Fort Monroe, Va. S. O. 87, Department of the East, April 25, 1885.

FIRST-LIEUTENANT WILLIAM H. ARTHUR, ASSISTANT-SURGEON.—Assigned to duty at Fort Niagara, New York. S. O. 89, Department of the East, April 28, 1885,

FIRST-LIEUTENANT M. C. WYETH, ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Wadsworth, New York Harbor. S. O. 95, Department of the East, May 6, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MAY 30, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON CASES AT THE OPHTHALMIC CLINIC.

BY DUDLEY S. REYNOLDS, M.D.,

Professor of General Pathology and Diseases of the Eye and Ear in the Hospital College of Medicine, Medical Department of Central University of Kentucky, Louisville.

Reported by ALLEN KELCH, M.D.

I.—DACRO-CYSTITIS AND ULCERATION OF THE SOFT PALATE. CAN SYPHILIS BE ACQUIRED BY THE SUBJECT OF AN INHERITED TAINT?

GENTLEMEN,—I have arranged an especially interesting series of cases to-day for the purpose of illustrating some important points in practice, and for the purpose of comparing the results of treatment.

This young man, J. W., æt. 17, does not articulate well, the tears are flowing over upon the left cheek, and he has a pale, puffy appearance. Looking into the mouth in search of an explanation of his imperfect articulation, we observe that he has suffered the loss of considerable tissue in the soft palate, and is no longer able to contract the levator palati muscles sufficiently to close the space between the mouth and the vault of the pharynx. His front teeth are imperfectly developed, being crenated along the edge, and having an insufficient development of enamel to afford them a complete covering. This peculiar condition of the teeth was, a long time ago, described by Mr. Jonathan Hutchinson, of London, as being characteristic of inherited syphilis.

This patient says the ulceration of the pharynx occurred within the last two months, that the obstruction in the tear-passage of the left side appeared about the same time. He says that about a year ago he had a rash upon the skin, which the doctor said was mild scarlet fever. It lasted three or four months, and got well finally without treatment. Closer inspection shows small yellowish nodules upon the surface of the iris midway between the pupil and the lower margin. A drop of atropia instilled a half-hour ago has brought about an irregular and peculiar form of dilatation of the pupil, resembling the capital letter D, with its straight bar corresponding to the inferior margin of the pupil and the rounded portion above. The upper half of the iris seems undisturbed, while the lower half is rendered stiff and fixed by the infiltration of the materials out of which the nodular elevations of the surface have been constructed. These, I need scarcely say, are effused lymph-cells; they are lymph-corpuscles invested with a peculiar force that causes them to attain enormous size and to acquire a gelatinous consistency. They have stretched the pigmented connective tissue basement-membrane of the anterior surfaces of the iris until it is made quite thin, and in that way by stretching this membrane the pigment it contains gives to the pink-tinted giant-cells beneath a yellowish-brown cast. This is an interesting picture of syphilis. He has in the imperfect development of teeth characteristic signs of an inherited type of the disease. He is small in stature; the lymphatic glands of his neck, both the superficial and the deep systems, are distended with accumulated lymph, whilst the tonsils are about the size of small almonds and project out between the anterior and posterior pillars of the palate.

I ask but few questions in a case of this kind. I say in a case of this kind, meaning in a case of syphilis; but I am tempted to ask this young man if he has ever had any kind of sore about his genital organs. He says "no." Now, I shall not be satisfied unless he permits me to inspect. Before doing so, however, I shall appoint a committee of the class to retire to the surgical room and critically examine his organ to see if any scar marking the seat of any previous breach of continuity of structure can be found. (The patient interrupted by saying, "I have a scar, a little hard lump, where I had a pimple on the end of it," whereupon he exposed his organ and showed a considerable cicatricial formation by the side of the frænum preputialis.)

Now, gentlemen, the most interesting question that has been raised at this clinic for a long time presents itself in the consideration of this young man's case. Here are all the evidences of acquired syphilis in a person presenting what has long been recognized as characteristic evidence of inherited syphilis.

Is it possible we have here one of those rarely susceptible individuals who may have

syphilis by inheritance and afterwards acquire it, or is it possible that he had been entirely cured of the inherited disease before he acquired this second and new form? The facts remain that he has the teeth described by Hutchinson, and that he has acquired syphilis.

We shall overcome the obstruction in the tear-passage by the careful introduction of a Bowman's probe No. 4, previously nicking the inferior punctum with the scissors.

He says his bowels move regularly and his appetite is good, but he is tortured with pains at night, and is unable to sleep. Let him take thirty grains of the iodide of sodium in a tumblerful of water every four hours, and report here again next Monday. If by that time the ulceration has not been arrested in the soft palate and the gummata of the iris have not disappeared, we shall double the dose of the iodide and go on increasing it by the addition of thirty grains to the dose every four or five days until the desired therapeutical effect has been secured or the toxic manifestation appears. A great deal is being written and said now concerning the use of the iodides of sodium and potassium in the manner just indicated. Some claim that it originated in Europe, others claim that the late Prof. Van Buren, of New York, developed the good effects of that practice. I suppose it is impossible to decide who first used it in this way, yet I am inclined to think it grew out of the recognized necessity of increasing the dose of medicine until some effect is observed. I have practised this method for twenty years, and would not now undertake to say whether it came about as I have just suggested, or whether I learned it from some other source.

II.—DIVERGENT SQUINT.

You will all recognize Miss H. as the young lady who two weeks ago to-day came here with a very ugly divergent squint which began in childhood and went on until she had reached her eighteenth year, when a travelling doctor came to Louisville and put up at one of the hotels, announcing in the newspapers that he could cure squint without pain and without interfering with the use of the eyes. This poor girl sought his aid. His want of anatomical knowledge may be inferred from the fact that he cut through the conjunctiva, cut through the fascia, and wounded the outer surface of both external recti muscles, and put a pair of smoked glasses upon the patient. His financial rapacity is exhibited in the fact that he took fifteen dollars, which was all the money the poor girl had, and told her she would be well the next day. As recovery came on, the wounded muscles contracted more and more, and the squint was much aggravated. As you remember, two weeks ago to-day I divided the tendons of both internal recti muscles, and, advancing them each about a quarter of an inch, carrying silk sutures through the theca of the muscles, stitched them firmly to the ocular fascia at the point where the division of the tendon was made with the scissors upon the scleral surface. You observe the eyes are now not nearly so prominent as before, and that, although there is considerable redness remaining on the nasal side of the ball, the eyes are in no way overly sensitive to light, and the muscular movement appears to be quite perfect.

You must know this result was not obtained by the surgical proceeding alone, but before operating I took pains to suspend the accommodative power in each eye, and to test its refraction separately.

We naturally expect to find myopia in eyes that squint divergently, but in this case I found hypermetropic astigmatism, which I corrected with glasses made after the following formula: O. D. $+\frac{1}{40}$ c., ax. 120°. O. S. $+\frac{1}{40}$ c., ax. 75°.

Having determined the error of refraction, I proceeded to do the operation necessary for the correction of the squint before ordering the glasses, and on the next day she put them on and has worn them ever since. I attribute the good result in her case chiefly to the use of these glasses, for they enable her to focus the eyes upon objects, and in that way have tended while the process of healing was going on to develop harmonious muscular action. It is a safe rule in estimating the causes of squint to conclude that the one great and never-absent cause is the want of power to focus the eyes both at the same time upon the same object, for it is in all cases necessary that the eye shall be fixed as an organ of vision in the direction of the object, and that perfect harmony shall be maintained in the muscular movements. The accommodative power of the eye may enable a person to overcome some errors of refraction, but in

cases like this, where the subject inherits a feeble constitution and all the muscular structures are wanting in tonicity, even small errors of refraction in the eye may so disturb the harmony of muscular movements as to bring about squint; but in the vast majority of cases where hypermetropia of any form exists the squint will be convergent, because of the greater necessity for taxing the positive accommodation in order to fix the eyes so as to see near objects; in this way developing irritation in the converging muscles, which finally leads to contraction and changes of muscular structure necessarily permanent in their nature; whilst in myopia the positive strain of accommodation is not only not present, but no demand exists for accommodative power at all, and the eyes are likely, if severely taxed, to diverge.

The success of all operations for the correction of squint will depend mainly upon the correction of the existing defect of refraction, excepting those cases where one eye is practically or wholly blind; then, of course, squinting occurs in consequence of the inability of the patient to focus light in this eye so as to give to it harmonious action with its fellow. It is not a wise practice to operate upon people under twenty-one years of age for the correction of squint in a blind eye, because the eye will deviate almost certainly in the opposite direction in the course of time, having none of that stimulating power which the sense of sight gives to the eye to control its nutrition as well as its motion. It is vastly important to correct any deviation of the optical axes in the eyes of the young, because the eye which is made to deviate, and therefore not used in the exercise of vision, gradually loses a part of its acuity of perception, and if the squint go neglected until the period of adolescence the obtunded sensibility of the perceptive powers of the retina can never be wholly overcome. An important question arises in this connection. In a case of squint in a young person who has already become amblyopic in the squinting eye, the determination of the error of refraction becomes very difficult. A good rule, however, is to correct the error of refraction in the good eye, and if there can be no approximate correction made by testing the squinting eye, let the patient have such a positive spherical glass as tends to produce the brightest view of the test-card, although no letter upon its surface may be seen. A convex glass which focuses light at about three inches from its centre may be carried about and employed at intervals for the purpose of magnifying type and other small objects for the amblyopic eye; and in this way, exercising it for a half-hour at a time, the dormant powers of the retina may be so stimulated and revived as in many cases to restore such good vision as will enable the patient to read with this eye. When the best power of perception has been developed in this manner, the eye should then be tested again in order to determine more accurately its error of refraction and the proper glass ordered for its correction. Thus you see if the patient's muscular defect be alone considered we shall always have the mortification to observe either what appears to be a return of the squint or the development of an opposite form from that which we essayed by operation to correct; whereas if we direct our attention to the true cause of the squint and correct this from the very beginning, tenotomy, judiciously performed, becomes at once a great triumph of surgical skill.

III.—CORRECTING SQUINT IN A BLIND EYE.

I now have the pleasure to present to you your classmate, Mr. B., who in early life, I may say in infancy, received an injury in the right eye which ruptured the capsule of the lens at the temporal margin, as is evident by the fact that the lenticular body has been absorbed and removed from the temporal margin quite out to the centre. The capsule, however, which contained the lens is opaque, and there is yet imprisoned between its walls a considerable amount of the altered and opaque lenticular body, particularly upon the nasal and superior side of the centre of the pupillary area. There are no adhesions between the iris and the lens capsulæ, and the eye apparently is entirely sound. He never had any pain in it, and cannot remember when he could see to count fingers with it. After careful examination with the ophthalmoscope, I concluded that the eye could not be restored at his time of life. He is now thirty-two years of age, and as the squint is so great as to attract public attention he desires to have it corrected, and you all remember that about a month ago I advanced the tendon of the internal rectus muscle, at the same time shortening it more than a quarter

of an inch by cutting off the tendinous end, having stitched the body of the muscle and its sheath to the ocular fascia along the line of division of the previous point of attachment of the tendon. He has been home and had the measles since then, and comes back with the eye still diverging one-eighth of an inch, by actual measurement. I now propose to instil a drop of a solution of cocaine and divide the tendon of the external rectus, in order completely to correct the squint. If he were under twenty years of age I should expect no permanently satisfactory result, but as he has reached the period of mature manhood I shall expect the result of the operation to be permanent.

You observe he does not wince now even at the introduction of the speculum, and I proceed, as you notice, to seize the conjunctiva on the temporal side, and by raising it with toothed forceps I snip the fold with the scissors. I now pass this curved probe or blunt hook through the opening made in the conjunctiva and the fascia back by the side of the upper margin of the external rectus muscle, and when the point of the probe has passed on behind the tendon of the muscle, by a rotary motion of the handle I am able to hook it up, so to speak; and by making it tense in this way the point of the scissors may be now introduced between the scleral wall and the curved extremity of the probe, in order to cut off the tendon directly at its point of attachment to the sclerotic. Scarcely a drop of blood has appeared; the tendon is now divided; the eye does not appear to be entirely relieved, and I therefore proceed to pass the point of curved scissors into the wound, and divide the ocular fascia and conjunctiva in a vertical direction upward, and then a similar division is made below. There is now more hemorrhage than we had at the division of the tendon. The eye seems to be recovering now from the effects of the cocaine; the patient, however, has no pain, and on sponging the blood away the eye appears to be quite relieved from its confined and squinting position. He is able to move both eyes now apparently in perfect harmony, although the one is sightless. He is now to have no other treatment except cold ablutions during the remainder of the day, and if, on rising in the morning, there is a little swelling in the conjunctiva, he is to bathe the eye in tepid water containing a small quantity of borax: under no circumstances is this eye to be tied up, and I have no doubt we shall see our patient recover day by day from the effects of this wound, and the eye will remain in almost perfect harmony of muscular movement with its fellow.

IV.—SYPHILITIC IRITIS.

S. S., æt. 45, says she suffers severe rheumatic pains in her limbs at night. For the last few days she has noticed rapidly increasing dimness of sight in the left eye. She was here several weeks ago on account of impaired sight in the right eye, accompanied by more or less pain and morbid sensibility to light. To-day, you observe, the conjunctiva covering the eyeball up to the margin of the cornea is quite red. The eye is sensitive both to light and to the touch, the tears gushing forth the moment the upper lid is raised. You observe surrounding the cornea what appears to be a red, slightly pinkish-tinted zone, on the outer surface of which are seen a few vessels very much dilated and tortuous in their course, radiating from the point of union between the sclerotic and the cornea out over the surface of the ball. Farther back from the corneo-scleral juncture are other vessels appearing more deeply within the conjunctival membrane, in fact, quite beneath its substance. These vessels, too, are largely dilated and quite tortuous. The general aspect of the eye to the inexperienced observer is that of a somewhat violent conjunctivitis. Even so good a practitioner as Professor Bartholow, of the Jefferson Medical College, has prescribed the sulphate of zinc and publicly commended it in cases of inflammation of the iris, evidently under the impression that this suffused or hyperæmic state of the conjunctiva requires some separate and special local treatment. I assure you, gentlemen, should you be led into the unfortunate practice of prescribing stimulants or stimulating astringents like the sulphate of zinc, or nitrate of silver, or sulphate of copper, in any case of iritis, it will not fail to aggravate the disease, greatly increasing the patient's suffering, and tending to complicate the progress of the disease in the iris, which in the course of time, if the pupil be well dilated and maintained in that condition, will subside without special treatment: in fact, no

local treatment except that which tends to relieve pain and to dilate the pupil is ever justifiable in any form of iritis.

This woman is an interesting subject for study. The iris on the nasal side of the pupillary opening in the right eye is now infiltrated, in consequence of which the pupil does not dilate symmetrically, as you see the rim of iris surrounding the pupil is much wider upon the nasal than it is upon the temporal side, whilst the pupil in the left eye, so narrowly contracted a half-hour ago, is now irregularly dilated under the influence of the four-grain solution of atropia which was then instilled. This irregular dilatation of the pupil in the left eye is quite marked, and gives to the pupil a stellate form, showing that its margin is at irregular points attached to the surface of the capsule of the lens. It is very important to make no mistake in the diagnosis of a case of this kind, and if you remember always to note whether the reddened conjunctiva has upon its surface any inflammatory products, you will in that way be able to determine whether conjunctivitis exists.

When the conjunctiva is suffused, as it is in this case, and no inflammatory products are found upon its surface, you may be assured you have to deal with an iritis, and not conjunctivitis. It is a great mistake to suppose you can tell by the color of the iris when it is inflamed. No appreciable discoloration takes place in the iris until the inflammation has been so long present as to produce irreparable mischief. The great danger in all forms of iritis is not that the iris will be destroyed or in any way seriously injured within itself, but that it will in a very short time after the onset of the inflammatory process contract adhesions with the anterior surface of the capsule of the lens, with which the contracted iris is always in contact at the margin of the pupil. The pupil naturally contracts in the presence of any form of inflammation of the iris, and it is a matter of the first importance to dilate the pupil and to keep it in that condition throughout the attack, for if the iritis be, as it is in many cases, due to what we call in this climate malarial poisoning, the antidotal quinine does away with the paroxysm, destroys or eliminates the malarial or miasmatic poison from the system and the consequent local inflammation, whether it be in the iris or elsewhere, so that the mere dilatation of the pupil constitutes in all cases the only form of local treatment to be thought of.

Sulphate of atropia is not always the best mydriatic; neither is it the best anodyne. A comparatively new medicine made by synthesis and called the hydrobromate of homatropine is much more promptly efficient in dilating the pupil, suspending the accommodative power, and relieving pain than the sulphate of atropia, duboisia, daturia, or any other substance known, with the single exception of hydrochlorate of cocaine.

It may be used in the proportion of one grain to the drachm of distilled water with the greatest freedom, as a local application to the eye, without any sort of constitutional disturbance whatever. It relieves pain promptly, and the ciliary neuralgia generally present in iritis, which is at times, and especially at night, when the patient is recumbent, wellnigh excruciating, is promptly arrested by its action.

In some very violent cases the hydrochlorate of cocaine, one grain to the ounce of water, may be instilled every four hours, with the effect of maintaining the dilatation of the pupil, absolutely destroying the pain, and greatly reducing the tension of the eyeball.

To remove the cause of the iritis in a case like this is not always a simple or easy proceeding. Being satisfied of its syphilitic origin, the patient shall have twenty grains of the iodide of potassium in a glassful of water every four hours, doubling the dose every fourth day until the iritis subsides and the nocturnal pains disappear. She is to have a liberal diet of animal and vegetable foods. She is to wear London smoke "coquilles" for protection from light, and may take out-door exercise.

Cannabis Indica as a Local Anæsthetic.—A. Aaronson writes in the *British Journal of Dental Science* that tincture of cannabis indica as a local anæsthetic is perfectly satisfactory. He has extracted with its aid as many as twenty-two teeth and stumps at one sitting. His plan is to dilute the tincture some three to five times, according to the probable duration of the operation. The diluted tincture is then applied in cotton-wool to cavities, if such exist, and also about the gums of the affected teeth. The beaks of the extracting-forceps are also, after being warmed, dipped in the diluted tincture.

ORIGINAL COMMUNICATIONS.

HYSTERICAL AFFECTIONS OF THE EYE.*

BY GEORGE C. HARLAN, M.D.

IT is well known that patients in the psychological condition called hysterical may not only present almost any symptom of disease without the existence of any lesion to which such symptom could be referred, but sometimes make excursions beyond the limits of classical pathology, and puzzle their doctors by originating symptoms that no possible lesion could explain.

It has seemed to me that the eye is an exceptionally common seat of such affections, and that their occurrence there has hardly received the attention from neurologists, or perhaps even from ophthalmic surgeons, that might with advantage be given to it. The accuracy with which eye-symptoms may be analyzed and the comparative certainty with which material changes in the tissues of this organ may be excluded afford special facilities for the study of its functional neurotic disturbances, which may often furnish the key to mysteries in other regions.

It is not my intention to trespass upon your time and patience by an extended discussion of this rather wide subject, but merely to direct attention to it by describing some of the symptoms of this class that have been met with in my own experience. As the shortest way of accomplishing this end, I will consider them in the anatomical order of the parts affected.

The lids are subject to both spasm and paresis of an entirely hysterical character. The former was well illustrated by a case recently published in the *Medical News*, in which violent and persistent blepharospasm, which had resisted other treatment for months, was cured at last by mental impression. The latter occurs in a singular form of transient paresis of the levator, occurring only on rousing from sleep.

The subjects of this affection complain of a great difficulty, sometimes an entire impossibility, of opening the eye on awakening. In some patients this occurs always in the morning, in some even after a nap during the day, and in others only when awakened during the night, when perhaps the consciousness and will-power are regained less promptly. Such patients say that the lids seem too heavy to be moved by their own muscles, but after they have raised them with the finger or bathed them in cold water the difficulty does not recur until they sleep again. My attention was first called to this symptom some ten years ago, and I have met with so many cases since that I have come to consider it not very uncommon. Both eyes are usually equally affected, but in several instances only one was involved. In one of the latter now under my care, the affected lid has a slight degree of granular conjunctivitis which could scarcely have other than a mental influence as a cause. With one exception, the subjects were all delicate women, some of them nursing. Of course this is not a symptom to be lightly considered without a careful investigation of the patient's general condition. The first time that I noticed it, it was one of the earliest indications of an intracranial tumor which a few months later caused the patient's death.

Irregular action of the external muscles of the ball is so frequently met with in nervous subjects that a well-known ophthalmic surgeon has discovered it to be the cause of nearly all the ills that nerves are heir to, and claims to remedy these ills by operating on the muscles. In fact, the external ocular muscles of hysterical patients are in a large proportion of cases not much better balanced than their minds, and no doubt decided results may sometimes be obtained by operating at the same time on both.

The most common form of this disturbance is insufficiency of the internal recti, which frequently occurs independently of any error of refraction. When very decided in degree, it may easily be detected by directing the patient to look at some small object eight or ten inches from the eyes, and then holding the hand before one eye. The covered eye, thus relieved from the effort of binocular vision, will deviate outwards. In some cases the preponderance of action is with the internal recti, and in others no two examinations made on different days will give the same result.

A spasmodic contraction of one muscle is more rare. I reported the following well-marked case some years ago ("Transactions of the Philadelphia College of Physicians," 1876):

* Read before the College of Physicians of Philadelphia.

Miss M., a little below par in general health, and of extremely nervous temperament, complained that frequently, and without special exciting cause, as at the dinner-table or at the opera, everything suddenly appeared double, and at the same time it was evident to her that she had lost control of the movements of one eye, which felt as if forcibly turned to one side. On closing the lids and pressing the ball for an instant, the symptoms would disappear. The acuteness of vision was normal, the balance of the external muscles correct, and refraction nearly emmetropic. The correction of a hypermetropia of 75 D. did not prevent the recurrence of the annoyance.

Two other patients have complained of occasional transitory diplopia, in one case horizontal and in the other vertical. These patients occasioned much anxiety at the time,—one ten years and the other about six months ago,—but I have seen both recently, and they are in good health. In this connection may be mentioned two curious cases of monocular diplopia. In each the symptom persisted for several weeks, but was without physical cause, and disappeared without special treatment.

The case recently reported (*Med. News*) of hysterical mydriasis and paralysis of accommodation occurring in one eye only, persisting for months, and finally relieved by mental impression, is, I believe, unique. There can be no suspicion of deception here, as there is no known mydriatic whose effects can be made to disappear so promptly and completely as these symptoms did.

Paresis or spasm of the accommodation is not unfrequent in neurotic subjects. The latter occurs usually, though by no means always, in connection with some error of refraction which acts as the exciting cause.

Retinal anæsthesia is a symptom which often occasions great annoyance to ophthalmic surgeons in testing refraction. Its subjects may at one moment have full acuity of vision, while at the next, with the same glass, it is very much diminished. They say that the letters become blurred and fade away after they have looked at them for a few seconds. The fact that this symptom persists under atropia shows that it is due not to irregular action of the accommodation, but to exhaustion of the sensibility of the retina.

This condition of the retina makes the typical hysterical field of vision more restricted on the side that is recorded last in the testing Such fields, the tracing and discussion of which have afforded much entertainment to the curious, are rarely found the same at any two examinations. A patient recently presented herself at the Polyclinic with complete horizontal hemianopsia of the right eye only. There was complete blindness below the horizontal line. As the ophthalmoscopic appearances were normal, I suspected hysteria. At her next visit the hemianopsia had disappeared from the right eye and appeared in the left, still in the lower half of the field, but with an irregular border. It was several times transferred from one eye to the other, each time with a more irregular outline, and after a few weeks disappeared entirely, leaving the field in both eyes quite normal.

I have met with several cases of colored vision,—blue streaks, yellowish fogs, etc.,—of transitory character and evidently nervous origin.

Unsteadiness, or even apparent constant motion, of any object looked at, particularly print, occasionally occurs, and, not admitting of any physiological or optical explanation, may be classified as hysterical.

The most striking symptom, and the one that has naturally excited the most interest, is simulated blindness. For obvious reasons of expediency, this is usually monocular. At various times in the last ten or twelve years I have reported four well-marked cases (*American Journal of the Medical Sciences*, October, 1873; "Transactions of American Ophthalmological Society," 1882 and 1884). Two were cured by exposure, and the others got well without ever knowing that they were suspected,—possibly without having suspected themselves. One of them had a history of an attack of complete blindness, evidently of the same character, of both eyes occurring some time previously; and another such case has been reported by Dr. D. H. Agnew (*American Journal of the Medical Sciences*, October, 1873).

Various tests have been devised for the detection of simulated monocular blindness. The one most used has been Graefe's prism-test. If the patient can be made to admit double vision when a prism is held before the well eye, vision with both eyes is proved. A very simple test suggested by Warlamont may sometimes succeed, and in his hands has proved conclusive even as legal evidence. He displaces

the axis of one eye by slight pressure upon the ball with the finger, and shows the suspected person two small dots on a piece of paper. If he says there are four, he is at once convicted. It must be remembered that these tests do not show how much the eye can see, and do not even prove useful vision. This can sometimes be done by an equally simple test suggested by Javal. He causes the person to read while a ruler is held three or four inches from the face and directly in front of the nose. As part of the print is concealed from each eye by the ruler, it can be read continuously only by the use of both. An elegant but more difficult means of detection is afforded by the stereoscope (Schweigger, *New York Med. Journal*, February, 1866). A test that has proved very satisfactory in my hands is one that I first employed in a case reported in the *American Journal of the Medical Sciences* for October, 1873. It consists in placing a strong convex lens before the well eye and requesting the patient to read print held considerably beyond its focal distance. If he reads at all he must read with the blind eye, as the lens used in this way excludes distinct vision from the other as effectually as an opaque screen. Suspicion is less apt to be excited if the trial-frames are used with a glass of low power in the other side. This simple test not only establishes the fact of vision, but enables us to determine its degree, and even to measure the accommodation. Three of my patients were detected in this way; in one case, at least, after a careful trial of the prism-test had completely failed.

When blindness of both eyes is simulated, we are, of course, deprived of any optical means of detecting it. Etherization, as suggested in an article on Malingering by Drs. Mitchell, Morehouse, and Keen (*American Journal of the Medical Sciences*, October, 1864), might prove successful. They found it so in deafness, and a case of hysterical deaf-dumbness was detected and cured in this way some years ago by Dr. Hutchinson, at the Episcopal Hospital.

These cases of hysterical blindness offer a curious and most interesting psychological problem. In some there is evidently a more or less deliberate deception, the result of an insane craving for sympathy or personal importance, or the motiveless freak of a disordered mind. Patients of this class are like the fasting girls, who develop a superhuman ingenuity in the effort to make it appear that they live without eating. One of the patients referred to, after obstinately maintaining the deception for two years, abandoned it at once on detection. In the case of others, however, the charge of intentional deception can by no means so easily be maintained. Indeed, a careful consideration of their other symptoms, their surroundings, and their previous good character is almost enough to acquit them of acting a part. I have sometimes suspected that, though they read well enough unconsciously, they might not be capable of conscious vision with the affected eye; that there might be some mysterious derangement of the process of perception,—a kind of negative hallucination, if such an expression could be allowed.

Though it is often a comfort in doubtful cases to remember that patients are not always what they seem, we cannot be too careful to avoid classifying a case as "nervous" until every possible organic change has been rigidly excluded, or supposing that we have really explained our patients' symptoms when we have called them hysterical. It is too often true that, as Charcot says, neuroses bear within them the germs of material lesions, and that a disease apparently nervous may at any moment become an organic disease.

The ophthalmic surgeon meets daily with patients whose symptoms not many years ago might well have been classified as hysterical, but whom the deeper knowledge gained by the ophthalmoscope and optical tests now proves to have a substantial basis for their complaints. Doubtless the limits of this convenient term will be still further restricted in proportion as our knowledge of pathology expands and our means of accurate diagnosis are improved.

DEATH OF PROF. PANUM.—The death of Prof. Panum, of Copenhagen, the President of the last International Medical Congress, occurred recently. As a scientific pathologist Prof. Panum had attained high distinction, being especially known by his works on Transfusion and on Embolism. He was Professor of Physiology at Copenhagen, where he will be greatly missed. His death is a great loss to medical science.

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

LUPUS AND ITS TREATMENT.

DR. WALTER G. SMITH (*Dublin Jour. Med. Sci.*, February, 1885) contributes a paper on the nature and treatment of lupus, based on an experience of sixty-six cases observed in hospital and private practice during the past sixteen years. He finds that this disease occurs in Ireland in the proportion of 1 case to every 200 of skin-diseases of all kinds; in England, 2.5 to every 100; in Scotland, 1 to 50; in America, 1 to 400 (according to the statistics of the American Dermatological Association, in the proportion of 1 to 245). Dr. Smith has found the disease to occur in females more than twice as frequently as in males.

Lupus is to be differentiated from scrofuloderma, syphilis, psoriasis, and eczema. In the brief remarks which Dr. Smith makes on diagnosis he enters a protest, in which all advocates of clear and definite ideas in dermatology must join, against such errors in nomenclature as the use of the terms "syphilitic lupus," "syphilitic psoriasis," "psoriasis lupus," and "lupoid."

It seems strange to allude to the possibility of mistaking lupus for chronic eczema, and *vice versâ*, but Dr. Smith has seen cases of superficial lupus confined solely to the helices of the ears, where the superficial appearance almost exactly simulated that of eczema. The diagnosis rests upon the extreme chronicity of the process, and especially upon the existence of scarring, and other evidences of friability and loss of tissue. Primary lupus of the inside of the nostrils may easily escape detection, and it is probable that some cases of supposed intractable "eczema" of the nasal mucous membrane are really lupus. Lupous perforation of the cartilaginous septum may occur without any external manifestation of the disease, but Dr. Smith has never known the vomer to be attacked. In cases of long-established facial lupus it is not uncommon to meet with lupus on the gums, showing itself as a well-defined granular red fringe. In all the cases observed by Dr. Smith the disease commenced in and was usually limited to the region of the incisor teeth of the upper jaw. Nor is lupus very rare upon the palate; but Dr. Smith has seen only one case of lupus invading the larynx. Lupus of the conjunctiva is common enough (in Ireland) from extension of facial lupus, but primary lupus of the conjunctiva is rare. Of lupus involving the vulva Dr. Smith has seen but one case. Among the rarer forms is lupus mutilans, which as it occurs upon the hands resembles lepra.

In one case Dr. Smith observed the supervention of malignant disease upon lupus. A man, aged 35, who consulted him for extensive lupus of the face and nose, presented himself subsequently with a large, dark, fungating, malignant growth springing from the nose. This was removed, but the patient succumbed to a recurrence of the malignant growths in the course of the year.

After going on to speak of the pathology of lupus vulgaris (an abstract of this portion of the paper is given separately in the present report), Dr. Smith goes on to speak of treatment, the two objects of which he says are (1) to check the development and extension of the morbific virus; (2) to destroy the existing foci of disease. Of course, with our present views as to the nature and relationships of lupus, cod-liver oil, iodine, iodoform, iron, arsenic, and the adoption of all measures calculated to fortify the system are called for. As to local measures, none are to be used exclusively, and no individual method will reach every case. Relapses also will occur in a considerable number of cases, in spite of any and every treatment. It should be remembered that when there is much irritation, soothing treatment should first be adopted. Severe local procedures do more harm than good.

For the local extirpation of the new growth the chief methods have been as follows:

(1.) Chemical agents, as iodine, arsenious, carbolic, and pyrogallic acids, caustics, as Vienna paste, and salts of silver, mercury, and zinc, Landolfi's paste. Some of these, as caustic potash, Vienna paste, and Landolfi's paste, destroy both sound and diseased tissues indiscriminately. Others, as arsenious and pyrogallic acids, when carefully used, destroy only the diseased tissue.

(2.) Thermal agents are such as the actual cautery, or the galvanic cautery, or Paquelin's instruments.

(3.) Mechanical measures,—*e.g.*, excis-

ion. Within the last few years much attention has been directed to certain modifications of operative treatment. Of these may be named (*a*) Multiple puncture, introduced by Veiel (1871) and Dubini, and advocated by Volkmann. This method is wanting in precision, and is applicable to only a few cases of limited extent, and in an early stage. (*b*) Linear scarification, an extension of the idea of multiple puncture; introduced by Squire, and largely used in France by Vidal and Besnier. The object of each of these methods is to starve the neoplasm by cutting off or interfering with its blood-supply. (*c*) The curette or sharp spoon (Volkmann, 1870), or method of erasion. This method of treatment is best followed up by immediate cauterization of the raw surface, in the hope of destroying the outlying germs of the disease. Dr. Smith prefers decidedly the method by erasion. With regard to the distinctive features and merits of the methods of scraping or erasion and of scarification, the first differentiates sound from diseased tissue,—for healthy skin will not give way to the spoon,—it is rapid of execution, is not, as a rule, followed by much after-pain, and the scraped surface heals very quickly, leaving a level and tolerably sightly cicatrix.

Scarification is applicable to some situations where erasion cannot be employed: it is less painful than erasion, it results in a minimum loss of substance, and it is especially adapted to diffuse non-ulcerating infiltrations. The scar is hardly perceptible, and is less liable to result in keloid than that left after erasion. Hence in lupus of the face, where appearances are to be preserved, linear scarification deserves a full trial.

LUPUS OF THE PUDENDUM.

Dr. Mathews Duncan (*London Med. Times*, November 15, 1885) under this name describes a disease which resembles lupus of other parts, though he does not assert that it is pathologically the same. The disease chiefly affects women during the child-bearing period of life: it is rare or unknown in children and men. Dr. Duncan classifies the cases as of "lupus minimus" and "lupus maximus." A case of lupus minimus may, on superficial examination, be classed with urethral caruncle, or eczema of the vestibule, or as pruritus pudendi. A case of lupus maximus may be taken for one of tertiary syphilis, or of elephantiasis, or of cancer. Though usually only affecting the pudendum and neighboring parts, it may spread over the adjacent parts of the hips and thighs. It may attack the vagina and the urethra and rectum; it may attack the cervix and body of the uterus. There are no tubercles in this form of lupus, but small red points sometimes show themselves. Patients are often in blooming health and show no sign of scrofula. This form of lupus may ulcerate superficially or deeply, or may take on a hypertrophic form. The ulcerative form is often quite destructive, eating away large portions of tissue, while the milder variety, called by Dr. Duncan lupus minimus, may show only little red pinhead spots, which change, healing and reappearing as months go on, or there may be excoriated patches, or a minute ulcer, or a caruncle.

The hypertrophied form is described by Dr. Duncan as also varying greatly in form and appearance. When large the lesions are usually ulcerated, but ordinarily present no abnormality of color (?) or surface. The nympha or labia are apt to be the seat of this form, although it occurs elsewhere about the genitals and even the anus. As the histological appearances presented by this form of growth are in no wise peculiar, we are at a loss to know why Dr. Duncan has chosen to call it lupus. The coloration of ulcerated parts is always red, more or less pale or more or less deep. Other parts may have a natural brownish or red tint, or may be deep red, especially if inflamed, or they may be pearly or ivory-white. There may be inflammation of the surrounding parts, with copious secretion of pus from the mucous surfaces, but the affection in many cases causes marvellously slight symptoms, so that the patient may cohabit and bear children without being aware that she has anything more than "whites." Sometimes a copious hemorrhage is the first symptom. Sometimes, however, in lupus minimus the sensitiveness is extreme.

From cancer the disease is readily distinguished histologically, but without that evidence the appearance, history, and, if it affects the vulva, the early development of the inguinal glands will decide. If the disease is internal, it is very difficult to arrive at a correct diagnosis.

Elephantiasis affects the clitoris or labia

only, does not ulcerate, and differs histologically.

There is, Dr. Duncan says, an elephantiasic hypertrophy which occurs in tertiary syphilis, of a uniform dull leaden red color, sometimes ulcerated on touching surfaces, and the inguinal glands are affected. This may resemble lupus.

In the way of treatment, Dr. Duncan recommends removing hypertrophic masses and cauterizing ulcerations; both best done by actual cautery or by the galvano-cautery, when this is available. Cases even of very great extent may be ameliorated, if not cured, by this means.

The mucous membrane inflammations are to be treated by local applications of black wash. The general health is to be maintained, and cod-liver oil, arsenic, and iron may be given.

Dr. Duncan publishes another article on the same subject in the *Edinburgh Medical Journal* for July, 1884, accompanied by a chromo-lithograph. Neither the picture nor Dr. Duncan's descriptions are as clear as could be wished, and we leave his somewhat lengthened descriptions without a very clear mental picture of the lesions he depicts, and with serious doubts as to the fact of the disease being lupus in the proper sense of the term.

RECENT VIEWS OF THE PATHOLOGY OF LUPUS, WITH SPECIAL REFERENCE TO ITS ETIOLOGY.

In the course of Dr. Walter Smith's article on lupus, above abstracted, he gives a *résumé* of the more recent views of prominent dermatologists on this subject. He is understood to have lupus vulgaris alone in mind. The Anglo-French school holds that lupus has a constitutional foundation and is allied to scrofula. These views are well represented in a paper by Bésnier, reviewed in this series of reports (*Medical Times*, December 1, 1883). Mr. Jonathan Hutchinson regards lupus, on the whole, as a sort of cross produced by tendencies at once to scrofula and cancer, while it receives many modifications from peculiarities in the patient's skin, and has morbid tendencies in one or the other direction. The Vienna school, living as it does in the past, clings to Hebra's view that lupus is an exclusively local affection, and hence constitutional treatment is rejected as useless. Converging evidence, however, has for some time been accumulating in favor of the doctrine that lupus will find its true place among the chronic infective diseases of the skin,—*i.e.*, those dependent upon the action of an organized virus capable of reproducing itself in the body (*e.g.*, lepra, syphilis, and tuberculosis).

The question is this: syphilis has a specific virus, likewise leprosy and tuberculosis: is it so with lupus? Of course the proof desired just now is as to the existence of a lupus-bacillus or of tubercle-bacillus in lupus. As yet this has not been shown to exist, though Neisser, a late writer on the subject, held that forthcoming proof was only a question of time.

Considering the question from a clinical aspect, Kaposi and his followers are unable to see any connection of lupus with scrofula or tubercle, while numerous skilled observers in England, France, and Germany recognize the points of resemblance and note the frequent coincidence of cheesy affections of the glands, bones, and joints with lupus. Fagge has, with Dr. Smith, himself observed the development of lupus secondary to suppurative strumous inflammation. Tilbury Fox states that lupus in many cases occurs in phthisical subjects, and Mr. Hutchinson has pointed out that phthisis is not unfrequently observed in the families of those suffering from lupus. It is true that lupus is rarely observed in several members of the same family, that it is seldom found in combination with general tuberculosis, and that we have no evidence of hereditary or direct transmission in the human subject.

The histological question has been elucidated by a number of recent writers. Ziegler says that caseating miliary tubercles and lupus nodules resemble one another at times exactly, the process being the same in kind but different in degree. Koch, following up Friedländer's anatomical investigations, found tubercle-bacilli in several cases of unquestionable lupus. Other authors, as Duncan, Pfeiffer, and Doutrelpont, have made the same observation.

Experimental proof of the affinity of lupus and tuberculosis has been obtained by Koch, Pagenstecher, and others, which outweigh the negative results of Vidal and Leloir published two years ago. These results were obtained by inoculations in animals, whereby lupus inoculated was found to produce tubercles containing bacilli.

Lupus, therefore, may be regarded as a form of tuberculosis of the skin. The relationship between lupus and tuberculosis is expressed by Dr. Smith as follows:

Tuberculosis of the Skin.

1. *Miliary Tuberculosis.*	2. *Lupus* (*tuberculo-derma*).	3. *Ulcerating Scrofuloderma.*
Miliary tubercles and ulcers as part of a general tuberculosis.	A harmless (*quoad* system) form of tuberculosis, mostly limited to the skin.	*I.e.*, ulcerations arising from bursting of a "cold" subcutaneous abscess.
Caseates.	Does not caseate.	Often yields well to treatment.
Very rare.		

Symmetrical.	*Unsymmetrical.*
Lupus erythematosus.	Lupus vulgaris.
L. sebaceus, etc.	L. exulcerans, etc.
Very difficult to cure.	Local malignancy.

Aberrant forms.

(To be continued.)

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

SERVICE OF CHARLES K. MILLS, M.D.,

Neurologist to the Philadelphia Hospital, Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic, etc.

Reported by ROBERT COYLE, M.D.

HYSTERO-EPILEPSY IN THE MALE.

IN the first case which I shall present for consideration to-day we are confronted with the important question of the diagnosis of epilepsy from hystero-epilepsy. The diagnosis in this case is more difficult because the patient is a man. That hystero-epilepsy, and other manifestations of hysteria, do occur in males is a fact considered in neurological circles as beyond the pale of dispute. Richer has recorded a case in a lad of 12 years, from the practice of Charcot; Olier reports and other observers have placed several cases on record, and I have seen a few cases, but the whole number as yet reported is not large.

I will show you the patient, giving his history in some detail, and will then discuss the question of diagnosis.

W. F., aged 28 years, married, has one child. His seizures began seven years ago, when he had an attack while playing a game of pool. At this time he had, according to his account, a sudden feeling of giddiness or vertigo, in which he fell over and had a spasm, during which he thinks that he was unconscious. After the seizure he suffered from headache, but had no disposition to sleep.

On the night of the day on which he had his first attack he had a series of seizures similar in character to the first. In one of these he fell on a goblet and cut his arm. The spasms rapidly succeeded each other, and continued the entire night. From that time until the present he has been subject to these spells, though the paroxysms are very irregular in frequency. Sometimes he will have several attacks in a day. Again, he will be free from them for days, and perhaps for two or three weeks, but never for more than a month at a time. They have come on him while walking in the streets, and on several occasions he has been taken to different hospitals. Once he fell off a street-car and bruised himself, but not severely. About three years ago he fell down-stairs and injured his ankle. Two years ago he fell and cut his chin on the curbstone. The present is his fourth admission to this hospital. On his first admission he only remained over night; on his second and third he remained in the house for two or three weeks.

He has now been in the house for four weeks, and has had spasms every day and night since admission. He has had, by actual count, from five hundred to six hundred since he came in; and in one evening, from 7 P.M. to midnight, he had no less than thirty-eight. These seizures, which have been witnessed by myself and the two resident physicians, differ but little from each other, although at times some are more violent than others. They begin with a forced inspiration; then the patient straightens himself out and breathes in a stertorous or pseudo-stertorous manner. The pulse in this stage becomes slow, and at times is as low as forty-eight per minute. The temperature is not elevated during or after the paroxysm, but is normal or subnormal. The arched position is sometimes taken, but the opisthotonos is not very well marked. The paroxysm ceases by an apparent forced expiration, and the breathing then becomes normal, the patient remaining in a somewhat dazed condition, which is only momentary. During the attack the patient says that he is unconscious of his surroundings. In the interval between the attacks he suffers from headache and from pain over the region of the stomach. He also has tenderness on press-

ure over the lumbar vertebræ. In not one of the many attacks from which the patient has suffered has he bitten his tongue.

You see that we pay attention to many apparently insignificant points, but it is only by so doing that we are able to come to any positive conclusion.

What have we to deal with here? Is it epilepsy or hystero-epilepsy? It has been pronounced to be both. It may be both,—that is, two forms of disease in the same patient. It may be neither, but this is not likely. I believe the case to be one of hystero-epilepsy. Both in hospital and in private practice we are often called upon to decide as to the nature of certain grave spasmodic attacks, and to arrive at a correct diagnosis is sometimes exceedingly difficult. The fact that the patient is a male does not decide for epilepsy, as I have already stated. The rules of diagnosis are almost the same for males as for females, with a few exceptions.

In making a diagnosis between epilepsy and hystero-epilepsy, we can often come to a correct conclusion as to the nature of the attack by giving close attention to the following points: 1. The history and the causes of the disease. 2. The physical and mental condition of the patient. 3. Above all, the phenomena of the spasmodic attacks.

In hystero-epilepsy a careful study of the history of the case will often elicit a moral cause. We notice, in passing, that in hystero-epilepsy the patients rarely injure themselves seriously by falling, whereas in true epilepsy they very often suffer from severe injuries. This patient has injured himself slightly several times, and once somewhat severely.

The mental and physical conditions of a person suffering from hystero-epilepsy differ widely from those of the true epileptic. In hystero-epilepsy the number of attacks has little or no apparent influence on the patient's mental or physical conditions. There is no deterioration of the mind. The memory is not impaired. Hystero-epileptics are usually well nourished, and frequently of good physique. These diagnostic points are illustrated in this case.

This is not the case in true epilepsy. The number of attacks has a decided effect on the patient's mental condition. I show you here a true epileptic, whom I have brought before you simply for the sake of contrast. His demented appearance is obvious to all, whereas in the hystero-epileptic nothing in physiognomy or carriage indicates that the patient has been suffering from any disease.

I do not say that all epileptics have no mental power, but that some deterioration of the mind usually occurs and becomes well marked as the case progresses.

The paroxysms in epilepsy are very well marked, especially if it is epilepsy of the grave form. They are often ushered in with a scream. The patient suddenly falls, and at times is severely injured. The convulsion is generally violent, rapidly alternating from clonic to tonic spasm, without special phases and periods. Complete and profound loss of consciousness, with great distortion of face and eyes, is present. The tongue is frequently bitten, and after the attack the patient passes into a stupor. In regard to the distortion of the face and eyes, we find this sign usually absent in hystero-epilepsy,—as in this case and one which I saw at the German Hospital, in which the patient had a series of violent seizures lasting two hours, with marked opisthotonos, yet the facial expression remained calm and serene throughout.

These symptoms being so well marked, a diagnosis of epilepsy from hystero-epilepsy would seem not to be very difficult. Yet this is not true. At times it is almost impossible to decide one way or the other. It is said that in hystero-epilepsy there is no loss of consciousness; but this statement is not strictly true. This point is the most difficult one for physicians to overcome in arriving at a diagnosis, as in many text-books complete loss of consciousness is considered the strongest evidence of epilepsy. We do have loss of consciousness in hystero-epilepsy, particularly in the epileptoid varieties, or in the epileptoid period of the grave attack. Richer says that the loss of consciousness is complete during the entire epileptoid period in a case of a regular type.

To decide whether a patient is conscious or unconscious is not as easy as one would suppose. Varying degrees of consciousness may be present.

At times in hystero-epileptic attacks the patient may respond to some external influences and not to others. This is well shown in the case before you. We have a perverted consciousness, and it is hard to

decide whether the patient is positively and entirely unconscious of his surroundings.

In hystero-epilepsy the attacks are rarely single; usually they are repeated, as here, constituting the hystero-epileptic status more frequently than in epilepsy, although there is an epileptic status terrible in character.

In the series of attacks that these patients suffer from the seizures come on in rapid succession, the interval being brief, but may at times have a considerable time elapsing before the recurrence of an attack. These series are apt to last for hours or days.

Charcot and Bourneville's strong diagnostic point between hystero-epilepsy and true epilepsy holds good in this case,—namely, in epilepsy we have a peculiar rise of temperature during the convulsion, even to 104° F., whereas in hystero-epilepsy the temperature is nearly or quite normal.

The attacks that compose a series in hystero-epilepsy vary in duration and in violence. At first they are of a violent character; towards the end the seizure may gain in extent, but it will diminish in intensity.

Arrest of attacks by ovarian compression in females and by the application of electric currents can be brought about in hystero-epilepsy and not in epilepsy.

The action of bromides, drugs which are often used in both affections, favors the opinion that the two diseases are distinct. Bromides, according to Charcot and Richer so effective in epilepsy, are without effect in hystero-epilepsy.

Dujardin-Béaumetz, however, on the other hand, declares that "who says hysteria says bromides," and also that at the present time there is not a hysterical patient but has taken bromides, the bromide of potassium being the most frequently used.

The truth, I believe, is that bromides may be useful for temporary purposes, for certain phases and symptoms of the disease, but produce no radical permanent improvement in the disease hystero-epilepsy. Bromides have not helped this man. Moral treatment, electricity, and metallic tonics are more beneficial.

HYSTERIA AND EPILEPSY IN THE SAME PATIENT.

The next case which I shall show you presents another diagnostic difficulty with reference to hysteria and epilepsy.

S. S., aged 39, female, a Swede, came to this country in 1869. She says that her mother had fits of some kind. The patient had her first fit when she was four years old. Her menses did not come on until she was 19. With the appearance of her periods she had fainting-spells off and on for two years, and in these spells she would fall to the ground. After two years she improved somewhat, but still would have an occasional seizure like petit mal. Four years ago she had a severe fit in which she bit her tongue. This was a paroxysm of true epilepsy. It was witnessed by our chief nurse, a competent observer. Since then she has had attacks of some kind every month or oftener. She rarely has a true epileptic seizure. Often, however, she has hysterical and hystero-epileptic attacks. These paroxysms have been witnessed by myself, and by my resident physician and the nurse. Rarely they are epileptic, frequently they are hysterical.

Mental excitement will often induce a hysterical spasm, as was seen in this patient yesterday. Having had some trouble with some of the other patients, she began to cry and scream, then convulsions soon ensued. She was not completely unconscious, the tongue was not bitten, and no perceptible change in her countenance occurred. She did not sleep after the paroxysm. Her memory is somewhat impaired.

The coexistence of hysteria and epilepsy with distinct manifestations of the two neuroses, the condition here present, has been most thoroughly considered by Olier.* In discussing the case before you, let me give some of the facts and inferences of his paper. Beau, in 1836, and Esquirol, in 1838, first showed the coexistence of hysteria and epilepsy in the same person. Landouzy, in 1846, gave the name of *hystero-epilepsy with separate crises* to cases in which the two neuroses with distinct attacks occurred in the same patient. I think, with Olier, that it would be better to confine the term hystero-epilepsy to the affection in which hysterical and epileptic symptoms are mixed in the same attack, the

* Memoir which obtained the Esquirol Prize in 1881, by M. D'Olier, Interne of the Hospitals of Paris, on "Hystero-Epilepsy with Distinct Crises, considered in the Two Sexes, and particularly in Man." Translated and abstracted by E. M. Nelson, M.D., in the *Alienist and Neurologist* for April, 1882.

disease so well described by Briquet, Tissot, and others, but above all by Charcot and Richer.

According to Charcot, this disease is simply the most intense degree of hysteria.

In France the distinct existence of hysteria and epilepsy in the same individual is not, according to Olier, a very exceptional fact. M. Beau has reported it twenty times in two hundred and seventy-six cases.

The different modes of existence of hysteria and epilepsy when manifestations of the two neuroses remain distinct have been summed up by M. Charcot as follows:

1. Hysteria supervening in a subject already epileptic.

2. Epilepsy supervening in a subject previously hysterical.

3. Convulsive hysteria coexisting with epileptic vertigo.

4. Epilepsy developing upon non-convulsive hysteria. (Contraction, anæsthesia.)

Our patient probably illustrates the first of these modes of combination.

OÖPHORECTOMY FOR EPILEPSY OR HYSTERO-EPILEPSY.

H., aged 17, began to have epileptic or hystero-epileptic seizures in her thirteenth year. She had never menstruated. After some months' treatment with drugs, attention to diet, etc., without any result, eight months since an operation was performed, in which the ovaries and ovarian tubes were removed. Twelve days after the operation she had four convulsive seizures. She made a good recovery from the operation.

This operation at times is successful, but often it is not. This patient had several attacks, and then for a considerable period she was exempt from any spasm. After the operation, however, she had an attack of acute inflammatory rheumatism, with endocarditis and valvular trouble. This fact should not be lost sight of, for it has a practical bearing on the case; it has been noticed that convulsive paroxysms will sometimes be held in abeyance during febrile affections.

Last week the patient had several severe convulsive seizures, with loss of consciousness. Her eyes became fixed and turned upward; the face was at first pale, then red; the body became rigid, but no marked opisthotonos, and the patient for a few minutes afterwards was delirious or semi-delirious. (The patient had a slight spasm during the clinic.)

The question will arise whether it is right to perform such an operation for either epilepsy or hystero-epilepsy. I myself do not think that such procedure is called for except in rare instances, and decision in favor of the operation should be greatly influenced by the following considerations:

1. Whether or not any disease of the ovaries is present.

2. Whether or not any aura proceeds from these organs.

3. Whether or not the patient suffers from violent nymphomania.

TRANSLATIONS.

PULMONARY TUBERCULOSIS IN FAMILIES.—M. Leudet, of Rouen, read a paper before the Academy communicating the results of a study extending over twenty years and embracing fourteen hundred and eighty subjects, occurring in one hundred and forty-three families, which presented three hundred and twelve cases of tuberculous disease. The questions which he essayed to solve were:

1. What part should be given to heredity in the etiology of tuberculosis?

2. Can the hereditary influence in a family continue over several generations, while sparing some of them?

3. Can the predisposition to phthisis be extinguished by the marriage of a member of a healthy family with a descendant of a tuberculous one?

4. Does the propagation of phthisis by contagion exist in families?

5. Is marital contagion frequent?

The conclusions are as follows:

(*a*) Families may be divided into those which have not had a single individual affected by tuberculosis and those which have presented several.

(*b*) Tuberculosis in a single member of a family during several generations is that which is called *acquired*. This acquired tuberculosis attacks by preference individuals debilitated either congenitally or by previous disease.

Pneumonia and bronchitis do not seem to predispose in any marked manner to tuberculosis. Some persons of families in which tuberculosis occurs die at an ad-

vanced age, of affections most frequently foreign to the respiratory organs.

(*c*) Hereditary transmission of phthisis exists in more than half the cases. This is more marked on the maternal than on the paternal side. Hereditary phthisis makes its appearance in the descendant usually at from the thirtieth to the thirty-fifth year, whatever may have been the age at which it appeared in the ascendant. It appears at an earlier period usually than the acquired form. Two tuberculous antecedents increase the probability of phthisis occurring in the descendant. In tuberculous families a generation may escape, others being smitten.

(*d*) Pulmonary tuberculosis constitutes sometimes a morbid selection which strikes degenerated families with death. The extension of the affection is prepared by the existence among the ascendants of tuberculosis, cachectic affections, general paralysis, insanity, idiocy, etc. Among the descendants it is shown by the frequency of tubercular phthisis or bone-disease in some, and in others by arrest of development, idiocy, hæmophilia, deafness, otitis interna, coxalgia, and infantile paralysis.

(*e*) Disease of the bones and joints occurs in twenty per cent. of tuberculous families. Such lesions often precede the disease of the lung. Auto-inoculation is more frequent during the suppuration of tubercular osteitis. Coxalgia, ozæna, and otitis appear to be the lesions less grave and more susceptible of cure; they exist only in certain branches of affected families.

(*f*) The alliance of a healthy person with a member of a tuberculous one diminishes the liability of tuberculosis in the descendants, but does not extinguish it.

(*g*) Propagation of tuberculosis by contagion is not the rule, even in tuberculous families.

(*h*) Marital contagion is at least quite rare.

(*i*) Contagion seemed to find a support in the fact that in thirty-three families, containing fifteen persons affected with the disease, sixty-three children out of one hundred and twenty-four were affected with pulmonary tuberculosis with a period extending from one to nine years: more than half of the children thus affected were debilitated and of feeble constitution.

(*j*) The progress of tuberculosis is much slower among well-to-do people than in the working class.

(*k*) The rapidity or slowness of tuberculosis has no connection whatever with heredity.

(*l*) The cure of pulmonary tuberculosis occurs in both forms. Tuberculosis can be cured at all periods. The crude or softened tubercles of small extent are cured the most frequently.—*Revue de Thérapeutique Med.-Chir.*

Origin of Dermoid Cysts.—At the recent Surgical Congress, Prof. Masse, of Bordeaux, reported a series of experiments of much interest in their relation to the etiology of certain tumors. He placed within the peritoneal cavity of white rats fragments of tissue and even amputated limbs taken from young rats just born. A couple of months later he opened the abdominal cavity, and found that in certain parts of the peritoneum the grafts were converted into real cysts with resisting walls, with yellowish, cheesy contents. These cysts, of different sizes, were in some cases easily enucleated, and the animals recovered.

Microscopic examination showed that the interior of the cysts contained pus, fat, crystals of cholesterine, epidermic cells, and hairs, and only very slight traces of débris of connective or elastic tissue, the remains of the grafts which had not yet been transformed. On the wall of the cyst were found small hairs. In short, the new growths thus formed represented a perfect type of dermoid cysts, and due to inclusion experimentally performed. Moreover, these tumors offered sufficient analogies with certain pearly growths of the iris which owe their origin to veritable grafts consecutive to traumatism. Gross, of Nancy, published a memoir in 1884 in which a similar origin was ascribed to pearly tumors of the fingers. These examples of the formation of tumors by organic transplantation are interesting, and this mode of origin seems destined to play an important *rôle* in the etiology of tumors. The application of this view to the apparently traumatic origin of malignant tumors is suggested. During embryonic evolution certain cells may become encysted and remain quiescent until started into activity by traumatism.—*Bull. Gén. de Thérapeutique*, April 30.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 30, 1885.

EDITORIAL.

THE AMERICAN MEDICAL PROFESSION AND THE PROPOSED INTERNATIONAL CONGRESS.

IN a previous article we reminded our readers of the fact that the Executive Committee of the International Medical Congress at Washington is not subordinate to the American Medical Association, and is certainly not responsible to it for its official acts. But it is not to be inferred, therefore, that the committee is an independent organization in the sense that it is not to be held responsible to any authority. On the contrary, it is distinctly responsible to the medical profession throughout the country, in the name of which the invitation was originally extended by the only organization competent to speak for the regular medical profession of the United States,—the American Medical Association. The original committee of seven, appointed to organize the Executive Committee, finished its work when it reported that it had organized this committee, and we still think that it should have been discharged by the American Medical Association.

It appears, however, that the Executive Committee, in the exercise of its undoubted right, published a preliminary plan of organization, including an almost complete list of nominations for the various official positions, which has excited some criticism. A careful reading of this list shows evidence of haste and, possibly, some errors of judgment. A few well-known names are notable from their absence (in some cases, as we happen to know, they are voluntarily absent); others are conspicuously present who do not best represent the profession, and some names are repeated until the iteration becomes tiresome. What has excited the most comment, however, is the action of the members of the committee in dividing some of the principal positions among themselves. It is not that the nominations are unsuitable upon other grounds, but that they come in such questionable shape, that there is a disposition to challenge them.

The accessory committee appointed by the American Medical Association at New Orleans, we believe, has no right to traverse the work of the Executive Committee, because the Association had not the authority to confer such a power; but it can act as an advisory committee through which the voice of the profession of the country might make itself heard if the Executive Committee at any time seem disposed to arrogate too much authority to itself or forget its representative character.

We understand that a meeting of the committee of the American Medical Association will be called at an early day at Cleveland, Ohio. We hope that the Executive Committee will be invited to confer with this enlarged committee, and that an amicable and satisfactory adjustment of existing difficulties may be reached. It is evident that the members of the original committee did not exceed their power; although their judgment may be called in question, yet, as they acted in good faith, it is hoped that this will be conceded, and that no spirit of captiousness will be shown by the new members. If an irreconcilable antagonism is developed at the meetings of the committee it will certainly be fatal to the prospects of the Congress, which, in preference to coming where the profession is hopelessly divided, will simply reconsider its decision and meet elsewhere.

We understand also that the newly-appointed members of the committee of the American Medical Association are outspoken in their adherence to the doctrine that members of nominating committees

are *ipso facto* ineligible as candidates for the offices under their charge. It is yet to be seen, however, whether or not they will succeed in making this rule retroactive in its operation.

It is the unanimous wish of the profession that the first meeting of the Congress on American soil may be a brilliant and complete success. Whoever hazards this result by shameless self-seeking will be held responsible hereafter by an indignant and outraged profession.

THE PLYMOUTH OUTBREAK.—A STATE BOARD OF HEALTH WANTED.

THE endemic is gradually declining at Plymouth, mainly owing to intelligent aid and material assistance from without. It now appears that the outbreak was attributable to direct typhoid contamination of drinking-water, which is obtained principally from a mountain stream which is usually pure. Well and river water are also used to some extent in certain parts of the town. The local committee (Dr. J. A. Murphy, Lewis H. Taylor, and Joshua L. Miner, of Wilkes-Barre) has presented a report to the Water Company which gives such a compendious account of the endemic that we will reproduce a portion of it here (from the *Wilkes-Barre Record*, May 8):

"The committee of physicians requested by you to examine the Plymouth Water Company's reservoir and general source of water-supply, with reference to the present epidemic, report that we visited the reservoirs and stream on Wednesday, May 6. We find the reservoirs in good condition, and the present supply of water abundant in quantity and of excellent quality; nor do we find between the first and third reservoirs any possible source of contamination. Between the third and fourth, however, we find what seems, in our judgment, a perfectly clear explanation of past water-pollution and of the present epidemic of typhoid fever, to wit: In the only house upon the stream between the third and fourth reservoirs, and situated within forty feet from its banks, we find a patient now convalescent from typhoid fever. This patient visited Philadelphia December 25, 1884, and while there, as he thinks, contracted the fever. He returned to his home January 2, 1885, and from that time on was ill with the disease a number of weeks, the last visit of his physician being on April 12. On March 18 and 19 he suffered from severe attacks of hemorrhage from the bowels. The excreta from this patient—at least that passed during the night, without any attempt at disinfecting the same—were frequently thrown out upon the snow towards the creek, and within a few feet of your water-supply. This we have upon the authority of the nurses in charge of the patient, and the same is not denied by the other occupants of the house. The excreta passed during the daytime were thrown into a privy, the *contents of which lie upon the surface of the ground.* These excreta were thrown out from time to time; a large quantity no doubt accumulated and remained for some time innoxious upon the snow and frozen ground. From March 25 to March 31 the temperature, as shown from actual records, was daily above the freezing-point and sufficiently warm to melt a large quantity of snow, while early in April—to wit, April 2, 3, 5, 7, etc.—we had daily occasional showers, with mild warm weather. These thaws and rains carried away a large portion of the snow, and with it the accumulated poisonous excreta, directly into your water-supply. Supposing this to have occurred between March 25 and April 5, and allowing ten to fourteen days as the natural period of incubation, we would expect from this cause an outbreak of typhoid fever to occur from the 5th to the 15th of April. The time of the proven contamination of the water-supply, allowing for the proper period of incubation, corresponds so nearly with the onset of the epidemic that we can but conclude that in this explanation we find sufficient cause for the present epidemic.

"Our opinion that this present epidemic was caused by the water-pollution is strengthened by the following facts: We find six hundred feet down the stream from your first reservoir, from which your supply-pipes start, an occupied house in which two children are sick with typhoid fever. The family dip water from the stream below the reservoir, and have at no time used either river or hydrant water. A little further down the stream we find a house in which the sickness prevails, the occupants of which use hydrant water, while a house situated but sixty feet distant, in which well water is used, is free from the disease. A little further to the left of these houses we find on Temperance Hill eleven families using well water. All of these are reported free of the disease. We find almost every family on the upper side of Lee Street who use hydrant water affected with the disease, while those on the lower side of the same street using well water are all free from the disease. The same relative state of affairs exists on Davenport Street. We find Ackley Street supplied with a small pipe with back water and but few people affected, while on Franklin Street, supplied by the regular main, many affected. On Franklin Street we found the fever existing in one house where well water was used, but of the two patients ill the first affected was a girl of nine years who had been attending school, and who no doubt was in the habit of drinking water away from home. We doubt not that many cases may exist where well water is used, but we believe that in every case it would be found upon investigation that the patients first attacked in such house were those who were accustomed to drink water away from home."

This report is clear and apparently conclusive, and we are glad to see that the committee from this city (Drs. French and Shakespeare) endorsed the conclusions of this committee with regard to the nature of the disease and its exciting cause, and united with it in exonerating the river water from the charge of originating this disastrous endemic.

The revelations that have been made to us with regard to the unsanitary condition of Plymouth constitute in our mind a perfectly unanswerable argument in favor of a State Board of Health. Had one been in operation a few months since, many lives might have been saved, and untold suffering and sorrow averted. If every physician in the State would exert his influence, the bill now before the Legislature could at once be adopted and the Board actually in operation before the cholera-season arrives.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

SOME little time ago I said something about the movement, just then active, for establishing a teaching university for London, and the advantages which would probably accrue from systematic lectures delivered by professors on various subjects in lieu of the present lectures at many of the London schools. Another phase of dissatisfaction with existing arrangements as to medical teaching in London has more recently cropped up. Hitherto initial movements in our profession have been set on foot by the medical corporations, who have always kept their eyes well fixed on their own vested interests. Anything likely to militate against the two well-known Royal Colleges—(1) the Physicians' and (2) the Surgeons'—would of course meet with no encouragement from the ruling bodies of either corporation. It is no more to be expected of them that they will contemplate any scheme which will threaten their existence, or even curtail their privileges or strike at their interests, than it could fairly have been of the animals when summoned to declare how they preferred being cooked. Their answer was, they preferred to live on without any cooking at all. So in all this movement the two corporations have confined themselves to openly throwing cold water on the agitation, and in private scheming how to thwart the agitation by a conjoint examination of their own. It sounds almost incredible, but it is said these senescent oligarchies have actually been inane enough to entertain the consideration of their granting degrees, which hitherto it has been regarded as the function only of universities to confer. Only brains undergoing senile changes could seriously entertain such an absurd and ridiculous proposal. As nothing worth the having is likely to spring from the senescent scheming of the medical corporations, anything worth entertaining must come from somewhere else—if it is to be forthcoming at all. Consequently, the British Medical Association (a body from which, in time, much may be expected) has taken the matter up, or rather its Metropolitan Counties' Branch has. At a recent meeting of the Branch it was decided to send up a deputation to the Senate of the University of London, to ask for some modification of their examinations so as practically to open them to the ordinary medical student, against whom, as matters are, they are closed. They asked the University—"*a*, to modify its regulations and procedure so as to adapt them to the requirements of the medical profession in England; *b*, reconsider and modify the two preliminary examinations; and, *c*, admit upon the Senate, as members of the Senate, a certain proportion of representatives of the metropolitan medical schools." The reader will gather from this that the difficulty lies in the preliminary examinations, and not in the strictly professional examinations.

To a Royal Commission in 1881 the University had made answer, "To increase the number of those who might seek the degree of the University has been, in the estimation of the Senate, quite subordinate to the maintenance of the high qualification of its graduates." The consequence of this policy has been to practically divorce the University of London from the medical profession, for ninety-three per cent. of metropolitan students go without the London degree in medicine,—and even this small proportion is decreasing. One has heard of a thing being improved off the face of the earth; and this seems to be the destiny of the M.D. Lond., unless some change or other can be instituted. The diversion of metropolitan students to the Scotch universities has been in strict proportion to this decline in London graduations. Why the University of London should not grant an M.B. and an S.B. on reasonable terms is best known to those connected with its working, for it is not apparent to an outsider. The anomalous condition of the English medical student, who cannot (practically) get a home degree in medicine, has long been familiar to every one who has thought about the subject. The University may not be able to see its way to the establishment of a professional staff for teaching purposes, but surely it can modify its rules and give ordinary passes and honors in the preliminary examinations corresponding to the passes and honors of Oxford and Cambridge degrees. It might retain its high standard for those who would essay honors and give them some recognition of the fact, and bring its "pass" within the reach of the average student. By doing so it would keep touch with medicine, instead of losing hold, as it certainly seems to be doing as matters

stand at the present time and with existing arrangements.

The old charters of the Royal Colleges have enabled these corporate bodies to keep out of existence anything like the university medical teaching seen in Scotland and on the Continent, as well as the conferring of degrees in medicine. They had the power and they used it, and what manner of use they have made of their power is seen in the present revolt against it all round. At the College of Surgeons the provincial Fellows are up in arms and banded together in order to compel their proper recognition from the ruling body. In the College of Physicians a still more lamentable condition of affairs exists. The members are excluded from any voice whatever in the affairs of the College. As to the Licentiates, of course they are out of the question. No one dreams of their ever claiming to have a voice in the conduction of affairs. Then as to the Fellows even, symptoms of revolt against the monstrous tyranny of their rulers are now being manifested. Last year the Council sent up a list of proposed Fellows, but the claims of the proposed individuals to such honor—if honor such a sign of nepotism can any longer be regarded—were slighted: the Fellows in general assembly simply rejected the lot bodily, and no Fellows were created last year. Little less dissatisfaction, it would seem, is felt at the list submitted to the Fellows for election this year, and it leaks out that a movement is on foot to abolish the present hole-and-corner system altogether, and substitute for it open election by the body of Fellows as the practice for the future. Certainly something different from the present existing system must obtain, if the Fellowship of the Royal College of Physicians of London has not to become a by-word and a sneer. Considering the pass things have come to, it is rather degradation than honor to be advanced to the Fellowship. *Quem Deus vult perdere, prius dementat!* So it was, and so it is; and the conduct of the ruling bodies of the great London medical corporations is bringing them into earned, well-deserved contempt. Regardless of any interests but their own (or what, in their short-sightedness, they assume to be their interests), indifferent to the rebukes administered to them by the medical press this last half-century, worse than indifferent to the voice of the bulk of their constituent units, the two self-willed oligarchies of senescent beings are undermining their own positions by their conduct. The members and licentiates of the College of Physicians and the members of the Royal College of Surgeons have simply to look on at the proceedings of the two Colleges, without having a voice either to protest against folly or to suggest some improvement. The natural consequence of this blended tyranny and misgovernment is that the profession, as a body, is casting about for some means by which it can remedy such a state of things. The British Medical Association furnishes a bond of union and a means by which the scattered units of the profession can make themselves heard. Of course the corporations see in this the coming power, the young giant, which is to upset them and their little proceedings. It was, then, by means of this federation that a proposition was tendered to the Senate of the University of London to modify its existing regulations so that its degrees could be brought within the reach of the bulk of medical students at the metropolitan schools, and thus emancipate the members of the profession from the thraldom of the two colleges. Such, then, is the present position of affairs. It seems unlikely that a teaching university can be established in the metropolis of England,—strange exception to the civilized world,—so the profession is trying to negotiate with the degree-conferring University. If the University could be opened to the great body of London medical students, then the Colleges would soon be left to their devices and wither in well-merited neglect. That is the meaning of the present movement. It is not the medical part of the examinations of the London University which present any obstacle to the student, but rather their severe, indeed prohibitory, preliminary examinations which constitute the difficulty.

After the above explanation of the existent state of affairs, some of the arguments of the different speakers may be placed before the reader with a good prospect of his understanding their bearing. Mr. Macnamara, of Westminster Hospital, as the President of the Branch, opened up the whole subject, pointing out what has been referred to above as to the deputation, and urging the abolition or modification of the prohibitory preliminary examinations. He trusted the University would assume a position towards the metropolitan medical schools similar to that held by universities towards teaching institutions elsewhere. He thought the written questions of the examinations might be previously subjected to a board composed of teachers selected from the different London schools of medicine. It was useless, however, to enter into details, he argued, until it was known if the principles would be accepted by the Senate: but perhaps the Senate would be disposed to meet a number of metropolitan teachers and confer on the subject. Anyhow, he would be glad of an answer one way or the other.

Dr. J. Syer Bristowe, of St. Thomas's Hospital, pointed out that the London medical student craved a degree in medicine as was possible elsewhere than in London, but that this was, under existing circumstances, simply impracticable. He thought the difficulty might be met by reducing the number of subjects for the preliminary examinations, leaving

the stringency unaffected. The present range was, in his opinion, too wide. Especially did he think the matter of biology might be restricted. The amount required now was well enough for a Doctorate of Science, but it was unnecessary for a medical man, and he said that a man might become a great physician without having studied any one of the subjects of the preliminary examinations. Indeed, the medical graduates who had done so much for the reputation of the London University passed at a time when no preliminary scientific examination was required.

Dr. Cholmeley said that London men were placed at a great disadvantage in practice by not having a degree like the other men who were their competitors on the same ground; indeed, they were heavily handicapped by their neighbors who could put M.B. or M.D. after their names. The intention of the preliminary examinations was no doubt to probe the degree to which a youth's intellect had been touched by his training, but the effect was to develop a race of crammers. He also thought that, as fifty per cent. of applicants failed to pass, it might be well to allow men to pass in what they did successfully, and only to have them up again on the subjects on which they had failed. The institution had been founded on the broadest and most liberal basis, and he hoped, after an existence of nearly half a century, it would not adopt the narrow plea of *non possumus*.

Dr. Lauder Brunton pointed to the number of men at the London schools who drifted off to Scotland or the Victoria University towards the end of their student career in order to gain the coveted medical degree. He thought, too, the difficulties of the preliminary examinations were increased by a want of accordance betwixt teachers and examiners. Their respective opinions differed so widely on some points that the candidates were often placed at a great disadvantage. What one man thought worthless another esteemed. He said of the University as it stands at present, "It increases the knowledge among the few, but it does not increase the knowledge among the general body to the extent that it might otherwise do." He thought it would be a great pity if another university were to be started, when the London University could do so much more in addition to what it had already done in raising medical education in this country.

Mr. Sibley followed, expressing his hope that the Senate would take a broad and general view of the matter and put English students on the same footing with students in other countries. He thought the stringency of the examinations had been carried too far. He continued, "There is no doubt that the increased stringency of examinations in all directions interferes very much with the true study of medicine in the clinical form." This was pretty much hinting that the student had to devote an undue proportion of his time to subjects which did not add to his efficiency as a practitioner at the bedside; and yet, after all, that is the great end of medical study and medical teaching; and it has been said that some very distinguished graduates in medicine at the London University, when they did enter practice, were found not to behave as if at home in a patient's bedroom.

Sir William MacCormac, with an experience in examining in the University and in other examining bodies, found the stringency in practical subjects not excessive.

Sir James Paget, as Vice-Chancellor of the University occupying the chair, made answer to the deputation as follows. He begged to assure it that the Senate were far from opposed to any changes, and were open to conviction on a matter of that sort. The arguments brought forward by the various speakers had been before the Senate at various times; but the difficulty experienced had always been to at once make their examinations fairly accessible and yet to raise medical education throughout the country. It was always open to the Senate to hear the opinions of others and to consider them. The Senate had already decided that the preliminary examinations should be divided so as to suit the convenience of the candidates; and it had been mooted to alter the regulation so that it would be necessary for a rejected candidate to reappear only for the subjects in which he had failed. The Senate were far from being in direct opposition to the views expressed by the deputation; but it was conscious of difficulties not so well known to those outside it, and that the subject must be looked at it by it from all sides and quarters. That the views expressed would have careful consideration he was quite sure. And so ended the first organized attempt to bring London into conformity with the rest of the world as to the matter of medical degrees!

So soon as a medical degree is practically attainable by the student in London, he will seek it and leave the diploma-conferring medical corporations to their own way and to their own place,—wherever that may be in the divine scheme. That the sway of the colleges may be broken is the earnest hope of all outside their pale and who are not personally concerned in their vested interests. That the utility of the Association in finding expression for medical opinion outside these accursed corporations is making itself felt is equally a matter for congratulation with all well-wishers to medicine. That of course the men who have grown old in the harness of the colleges will look upon such movement as revolt and detestable, and bewail it, is but natural. Having had their day of service, they wish to enjoy their day of power; but, on the principle that two wrongs do not make a right, it does not follow that they shall be left undisturbed in possession of

a power of which they make no good use, simply because their predecessors had held such power. The whole argument is rotten, "traced from within its inmost centre to its outmost skin." The writer has earned for himself odium and ill will in high quarters for his outspoken expressions of opinion from time to time in these letters; but this fact does not deter him, and will not deter him, from speaking out about abuses which exist (and the men who support them),—abuses which militate against the good name and fair fame of the medical profession, and lower its social position in England,—nor prevent him heartily sympathizing with those who are striving to improve matters. The tyrannous rule of the corporations is at last exciting a revolt against it; and all right-minded persons (in the writer's opinion) will find themselves in the ranks of the insurgents as soon as organization will enable the new forces to systematically attack the existing abuses.

J. Milner Fothergill.

NEW YORK.

THE Carnegie Laboratory of the Bellevue Hospital Medical College is completed, and was opened by the Building Committee for inspection by the medical profession on the 14th instant. The building is situated between First and Second Avenues on East Twenty-sixth Street, stands nearly on a line with the tenement-houses adjoining, is fifty by one hundred feet, and five stories high. The front is built of red brick, and there is a slight show at ornamentation. In the middle of the first floor is a wide hall-way leading to a broad flight of stairs in the rear; at the sides of the hall in front are two nicely-upholstered reception or faculty rooms, and on the right side in the rear a rather spacious reading-room, which will have to be lighted by gas, while on the left side is a room of equal size, having plenty of daylight, intended for the museum. These rooms are at present vacant. There are also water-closets on this floor. Below is the basement. The ornament of the building is the lecture-room, which is well lighted from windows on either side, in the rear, and from above; there are many tiers of comfortable fixed chairs with folding seats. On the floors above are large rooms for class-study and smaller rooms for individual students. On the whole, the building seems to be well arranged for the purposes to which it is to be devoted. It is understood that special opportunity will be afforded in this laboratory for study and investigation in bacteriology. Some of the principals of the Bellevue faculty are ardent followers of Koch. If the germ-theory of disease prove to be correct, it is thought by some that the study of bacteriology will at least assist in diagnosis, especially in early phthisis. Whether or not it will lead to improved methods of treatment is less certain. Koch, who I believe lays stress upon the importance of a pure atmosphere in the laboratory devoted to the study of bacteria, might perhaps take exception to the location of the Carnegie building. But it is one of the evils in large cities that only so much ground belongs to the private, and even to the public, institutions as their walls stand upon. One of the chief disadvantages of the neighborhood of Bellevue Hospital is the mal-odor of the atmosphere arising from the oil-works across East River.

It would seem the suggestions of Dr. Barker and Dr. Jacobi, that the several sections of the New York Academy of Medicine which have hitherto existed only in name should take on active work, will have a wholesome effect in calling into life certain important but latent forces of the Academy. Already the sections in Neurology and Practice of Medicine have organized,—the first with Dr. Putzell, a young but earnest and industrious worker, as President, and the latter with Dr. A. L. Loomis as President. The first meeting of the section on Practice was held in the halls of the Academy on the 19th instant, at which Dr. Andrew H. Smith discussed the subject of "The Irregular Manifestations of Malaria;" after which a general discussion took place upon the sources of infection and limits as to time of the infections of scarlet fever and measles. It is understood that other sections will also soon organize for scientific work.

Public confidence in the opinions of medical men seems to be increasing, but it is not yet of the strongest, and the prevailing impression that the best known, if not the best, of the profession in almost any community can be induced to testify on either side of a medico-legal question (it matters little of what nature) does not tend to strengthen such confidence. Might not celebrated city physicians, particularly those who have won a name in specialties, do something towards correcting this state of things?

How it pleases a surgeon who, when he performs a difficult operation a little out of his usual line, sees his patient recover and himself crowned with a new laurel! Dr. Shrady, whose name, besides being familiar to the medical profession as that of the editor of the *Medical Record*, is also becoming familiar to the general public in connection with General Grant's case, recently removed a large colloid tumor of the ovary, the operation being attended by dangerous but unavoidable difficulties. It was expected, of course, that the patient would die. Some days afterwards one of the gentlemen who had witnessed the operation, and had taken unusual interest in its progress, visited the wards of the hospital in company with Dr. Shrady, and asked what became of the pa-

tient with the ovarian tumor. Dr. Shrady, before replying directly to the interrogatory, began, as physicians are apt to do in their fatal cases, to recall all the unfavorable circumstances attending the operation, thus preparing the mind of his friend to exonerate him from negligence or want of skill in the presumable sad result. Imagine the astonishment of his friend, on reaching the ward, to see the patient sitting up in a chair, convalescent!

A few cases of typhus fever are reported in a tenement-house down town. As yet we have had no cases of cholera.

One hundred and thirty-four graduates in medicine received their diplomas from the College of Physicians and Surgeons on the 12th instant. R. C. S.

CINCINNATI.

DR. WILLIAM CLENDENNIN, Dean of Miami Medical College, died of catarrhal pneumonia last week, in the fifty-seventh year of his life. He was a graduate of the Medical College of Ohio, served with distinction as surgeon in the civil war, has been perhaps Cincinnati's most energetic health-officer, was a popular teacher, and had a large and (of late years) lucrative practice.

Dr. Walter Dun contracted scarlatina while attending some malignant cases of that disease, and is still quite sick at the Good Samaritan Hospital.

The sanitary condition of the city is far from being good, and the approach of hot weather and the possible appearance of cholera excite general apprehension, except in the minds of our political Board of Health.

A bill has recently passed the State Legislature authorizing the expenditure of four millions of dollars on our streets. The effect of tearing up so large an extent of pavement on the sanitary condition of our city is awaited with some uneasiness by those best qualified to judge. T.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN MEDICAL ASSOCIATION.

(Continued from page 623.)

SECTION ON PRACTICAL MEDICINE, AND MATERIA MEDICA AND THERAPEUTICS.

H. D. DIDAMA, of Syracuse, New York, Chairman; G. M. Garland, Boston, Secretary.

The Treatment of Carbuncles without Incision.—Dr. L. D. Bulkley, of New York, reported a case of a man, 56 years of age, with a carbuncle the size of a saucer (four inches in diameter) on the nucha. The patient was also glycosuric, and had previously been subject to eczema. The treatment was successfully pursued as follows. Locally, ergot, fluid extract (℥ij), zinc oxide (℥j), cerate (℥ij), spread upon patent lint and applied covered with cotton wadding; the dressing was renewed twice daily. Internally, calcium sulphide (in one-fourth grain doses every two hours) and a laxative ferro-saline mixture several times a day. Dover's powder was administered at night when the pain was severe. The patient was relieved of pain and was able to continue at his work; the carbuncle underwent rapid resolution without suppuration. This case was reported in order to illustrate his plan of treatment of carbuncle without incision, the points to be observed being careful avoidance of irritation, traumatism, etc.; avoidance of poultices; avoidance of incisions; non-administration of alcoholic stimulants; protection of surface with the dressing; the use of calcium sulphide; hygienic measures, good nutritious diet, and fresh air; symptomatic treatment of fever, pain, or constipation.

The special advantages claimed for this method are a comparatively short duration of the entire process; a comparatively small amount of pain; small amount of scar; no surgical operation; no detention from work.

In the discussion, Dr. J. F. Hibberd, of Richmond, Indiana, approved of the treatment by non-incision, and said that he had obtained satisfactory results from the use of oleate of morphine applied every two to three hours: with this the pain is always relieved within twenty-four hours.

Dr. Lynch uses citrine ointment.

Dr. Savage paints a ring of blistering collodion, and incises only if pus is formed.

Dr. Bulkley said that his method involved protection of the carbuncle and allowed Nature to do the opening when pus forms. It is of moment that the calcium sulphide be a good preparation: if exposed to the air, the compound becomes speedily converted into gypsum. The gelatin-coated pills form a preferable method of administration.

The Use of the Percuteur.—Dr. A. F. Pattee, of Boston, read a paper, and exhibited an instrument for producing vibration of nerves, devised by J. Mortimer Granville, of England, and styled by him the "percuteur." The object of the paper was to illustrate by means of cases the uses of this instrument in the treatment of diseases of the nervous system.

Hydatid Cysts of Brain.—Dr. R. Harvey Reed, of Mansfield, Ohio, reported a case of hydatid tumor of the brain in a man 46 years of age. Altogether, he had seen four cases, in two of which he had diagnosticated the disease during life. He claimed that hydatids in man might arise from two sources: the tænia echinococcus and the tænia solium.

In the discussion of the paper the views expressed by the reporter gave rise to adverse

criticism, and doubts were expressed of the nature of the cyst in the case reported, because of the absence of satisfactory microscopic evidence.

Dr. J. T. Whittaker, of Cincinnati, read a paper entitled *An Attempt at a Radical Treatment of Tuberculosis.* He had practised parenchymatous injections of corrosive sublimate in a series of cases, throwing one-eighth of a grain in a syringeful of salt water (one per cent.) directly into the consolidated portion of the lung. Thus far he had not been able to observe any favorable results, and there were no bad consequences to report.

The Secretary presented, on behalf of Dr. Austin Flint, a provisional report of a committee, of which he is the chairman, on "a Uniform Nomenclature of Physical Signs which occur in connection with the Respiratory System," appointed by the International Congress in 1881. The report contained a recital of the history of the committee and its work, and tabulated lists approved by the English and American Committees.

The chairman of the committee requested that those who are interested in the subject in this country will communicate to him such suggestions as may occur to them.

The Hypodermic Injection of Oil.—Dr. J. V. Shoemaker, of Philadelphia, read a paper in which he reported the results of the administration of oil subcutaneously. Reference was made to the experiments of Mengel and Perco with the hypodermic injection of oil in dogs, which demonstrated the absorption of fat when thrown under the skin. Subsequently Krueg, in an insane patient who refused to eat, and Whittaker, in a case of gastric ulcer, utilized this new method of administration with highly satisfactory results.

Shoemaker had used it in a number of cases, and recommended its further trial. He gave a drachm of either olive or cod-liver oil, two or three times daily, in addition to ordinary diet. If other nourishment be suspended, the injections should be given every two hours. One or two injections of castor oil given in this way usually produce a purgative effect. A comparatively large syringe is required, and the injection can be given in any portion of the body well provided with cellular tissue.

The Secretary also read a paper by Dr. A. T. Keys, of Cincinnati, on *Cardiagraphy.* It was accompanied by diagrams illustrating an instrument constructed upon the plan of the sphygmograph, to be applied over the point of impulse or the apex-beat. By the use of this instrument, the application of which was explained, it is possible to record graphically some of the characteristic features of the heart's action.

Relation of Chemical Facts to the Question of Contagiousness of Phthisis Pulmonalis.—Dr. N. S. Davis marshalled a series of arguments against the views which have been recently promulgated regarding the etiology, clinical history, and especially the contagious character of phthisis. He maintained that in the pathology of phthisis nothing less than a study of the chemistry of all the solids and fluids of the body, together with complete clinical history of the disease, will determine the question of the nature of the morbid agent. He did not regard the detection of the so-called bacillus tuberculosis as sufficient evidence of the existence of phthisis, any more than its absence would be negative testimony. He considered the bacillus as a mere accompaniment of the disease, and not its cause.

With regard to inoculation experiments, he concluded that a successful inoculation would teach either (1) that the bacillus by itself is the cause, (2) the accompanying matter may be the cause, or (3) the excretions of the bacilli may be the cause of the symptoms. He claimed that spores are universally present, ready to develop when in a proper medium. When a person presents a suitable soil for the cultivation of these bacteria, they will readily develop. The disease then requires a starting-point of deterioration or predisposition. Under these circumstances, logic would say that the deterioration or predisposition is the disease, and the bacillus only an accident. He rejected the view of the contagiousness of phthisis on clinical grounds.

In the discussion, Dr. Lynch, of Maryland, endorsed the views of the speaker, but they were vigorously opposed by Dr. Whittaker, of Cincinnati, who insisted upon the mycotic nature of tuberculosis. He could not understand how any one at all familiar with the recent literature of tuberculosis could refrain from admitting that this disease is as distinctly due to the bacillus as trichinosis is to the trichina spiralis.

To the statement that if consumption were contagious it should claim more victims than it does, he replied that two-sevenths of mankind are destroyed by it; and if allowance is made for those who are affected but die of other diseases, he believed that it would be found that more than one-half of mankind, at some time or another, is affected by tuberculosis. One source of error in the argument against the contagiousness of phthisis exists in the fact that the bacilli may remain undeveloped for a long time. Moreover, the disease may show itself in the bones or joints, and the symptoms may be obscure. He claimed that William Budd, from a clinical study of the disease, had recognized its true nature more than a quarter of a century ago, and his views had only been confirmed recently by the methods of exact science. Clinicians may ridicule the work of experimental investigation, with the methods of which they are not familiar, but they should hesitate before they reject the results of bedside-study of dis-

ease by their fellows, made long before the modern science of mycology was known.

Dr. R. J. Nunn, of Savannah, Georgia, read a paper *On the Mineral Foods, and how to give them*, in which the physiological relations and therapeutical indications of various inorganic preparations were considered.

Dr. J. H. Hollister, of Chicago, presented a paper on the *Cholera and its Treatment.* Discussing the origin of cholera, the lecturer ascribed it to the banks of the Ganges, in India, where it is endemic. In this country it is not endemic, but outbreaks can always be traced to transportation of fomites from foreign countries. It always moves along lines of travel, and in this country never appears in isolated localities. In the absence of the crucial test by inoculation, there is a doubt whether or not the "comma-bacillus" be the cause; but, whatever the cause may prove to be, it will be found that the conditions for the life and growth of the germ outside the system are warmth, moisture, and decomposing organic material.

The discussion was opened by the reading of a communication from Dr. Austin Flint, who had been appointed to open the discussion, but who had been prevented from attending the meeting. Dr. Flint announced his adherence to the hypothesis of Koch, that the comma-bacillus is the specific germ of cholera. From this stand-point questions of hygiene, quarantine, pathology, and treatment were suggestively referred to. He believed that cholera could be controlled and stamped out by vigorous sanitation. Opium is the main reliance in treatment up to the stage of collapse.

Drs. Jones, of New Orleans, and Whittaker, of Cincinnati, approved the views of Dr. Flint; Drs. N. S. Davis, Lynch, and Taylor were sceptical as to the specific character of the comma-bacillus, and agreed upon the value of isolation and cleanliness. In the collapse Dr. Lynch recommended hypodermic injections of morphine and atropine.

Dr. Schauffler objected, on the grounds of experience and observation, to the advice of the lecturer to allow water to be given freely to cholera patients.

Hemorrhagic Malarial Fever.—Dr. Jerome Cochrane, of Montgomery, Alabama, read a descriptive clinical paper upon a peculiar form of malarial fever which appears in some parts of the South, where it is quite common. It is either intermittent, remittent, congestive, or may be more or less continued. The peculiar feature of the attack is that it is attended by hæmoglobinuria and casts of the renal tubules. In some cases it is claimed that blood-cells may also be found in the urine. There is also more or less discoloration of the skin, with chills, fever, and excessive prostration. The bowels are constipated, and there may be vomiting of dark-colored material entirely free from blood. As regards treatment, quinine is considered not merely inefficient, but positively injurious. Calomel and soda have been productive of good results, and pilocarpine hypodermically administered, when there is suppression of urine, is of value, and in one case, where the patient was comatose, apparently saved life.

A paper by J. C. Wilson, M.D., of Philadelphia, on *The Specific Treatment of Enteric Fever*, was read by title at the request of the author.

The following were also read by title:

Syphilis as it appears among Negroes, by Thomas F. Wood, M.D., of Wilmington, North Carolina.

Some Practical Suggestions on the Administration of Potassium Iodide, by Morris H. Henry, M.D., of New York.

Ulcer of Rectum, by I. E. Atkinson, M.D., of Baltimore, Maryland.

Inquiries concerning the Resources of Non-Medicinal Therapeutics, by S. S. Wallain, M.D., of New York.

Fever as a Neurosis, by H. C. Wood, M.D., of Philadelphia, Pennsylvania.

The Germ-Theory, by Harold D. Ernst, M.D., of Boston, Massachusetts.

Blood, and How to Make It; Fat, and How to Reduce It, by Benjamin Lee, M.D., of Philadelphia.

Resorcin, by A. F. Pattee, M.D., of Boston, Massachusetts.

Similarity of Electrical and Nerve Force, by J. J. Caldwell, M.D., of Baltimore, Maryland.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

R. Stanley Sutton, M.D., of Pittsburg, Pennsylvania, Chairman; J. T. Jelks, M.D., of Little Rock, Arkansas, Secretary.

Treatment of the Secundines in Abortion and Labor.—Dr. William H. Wathen, of Louisville, Kentucky, read a paper with the above title.

The lecturer said that with this class of cases three courses might be followed,—expectant, immediate removal, or tentative. During the first two months of pregnancy, there being little danger of hemorrhage even if portions of the chorion remain in the uterus, he advised non-interference; later, the membranes should be removed by the finger, or by curette or wire loop. When the cervix is contracted, he recommended preliminary dilation. After labor the placenta should not be allowed to remain more than thirty minutes. If delay occur, he practises combined expression and traction.

Dr. James R. Chadwick, of Boston, thought that no rules could be formulated for the management of all cases, as the attendant circumstances widely differ. When the patient is known to be a bleeder, more active treatment is required than in ordinary cases. He

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denounced placental forceps, and urged the removal of the secundines with the index finger, which can also be used to dilate the cervix. In the discussion which followed, the views of the lecturer were concurred with.

Dr. Wathen, in closing, explained that he only advised the use of a dilator when the digital method had proved insufficient.

Parametric Abscess was the title of a paper read by Dr. W. W. Potter, of Buffalo, New York. A case was reported in which a woman, 38 years of age, the mother of three children, suddenly experienced pain in the right ovarian region, accompanied by tenderness; she had also fever and nausea. Eleven days later, the symptoms pointing to abscess, an incision was made into Douglas's cul-de-sac and three pints of fetid pus liberated. A drainage-tube was inserted and antiseptic irrigation practised. After an iodoform emulsion was thrown into the sac she improved rapidly, and was well a month after the operation.

Chronic Periuterine Abscess, its Treatment by Laparotomy, was the title of a contribution by Christian Fenger, M.D., of Chicago, which was read by W. W. Jaggard in the absence of the author. Among the practical recommendations contained in this interesting paper was the preliminary mapping out of the bladder by the use of the sound, marking its limits upon the surface of the abdomen. If adhesions have formed between the sac and the abdominal wall, the operation is simple. When the peritoneum has to be opened in order to expose the sac, care must be exercised in order to prevent the escape of pus into the cavity. It will afford some information as to the site of the abscess if a hypodermic needle be introduced into its supposed locality, and if pus is obtained, an aspirator-needle can be inserted by its side, which is left in the sac as a guide for the further steps of the operation. The incision into the sac should be made by the thermo-cautère. The edges are grasped with large forceps and dragged forward to prevent the escape of pus, and sponges rendered aseptic by zinc chloride (ten-per-cent. solution) are packed into the cavity after its evacuation, or its inner surface may be scraped. The edges of the sac are included in the abdominal wound, which is brought together with silk sutures. In ordinary cases no drainage-tube need be used, but the sac should be washed out daily with solution of boric acid; the wound is kept covered in the interim with antiseptic dressings. He proceeded to discuss laparotomy as compared with other operations. He regards exploratory laparotomy as preferable to supra-pubic exploratory puncture, since the escape of a single drop of pus into the peritoneal cavity may set up general peritonitis.

In the discussion, Dr. G. J. Engelmann, of St. Louis, said that the lecturer had very properly emphasized the fact that purulent periuterine collections were not necessarily dependent upon and not confined to the puerperal state. Laparotomy is a last resort, but it should not therefore be deferred too late. Exploratory incision in some cases alone enabled the diagnosis to be positively made.

Dr. Gordon, of Portland, believed that meddlesome gynæcology was the source of a majority of the cases of pelvic cellulitis. This remark led to indignant replies from Drs. Reed and Carroll.

Dr. Quimby reported a case of obscure abscess, where an incision was practised above Poupart's ligament, and parallel with it. The wound was packed and antiseptic dressings applied. The patient recovered.

Dr. Sutton, in closing the discussion, advised the use of the aspirator for diagnostic purposes, when the abscess cannot be positively located by percussion-dulness.

Dr. George E. French, of Minneapolis, read a paper entitled *How soon after Exposure to Sepsis may the Accoucheur resume Practice?* He had addressed letters of inquiry to some of the most distinguished operators in this country and in Europe, and obtained diverse opinions. Thornton, Savage, and Hegar consider time essential, even with the aid of antiseptics. On the contrary, the greater number of replies received may be summarized in the statement of Prof. Esmarch: "If one has thoroughly disinfected himself, he can immediately resume obstetric practice. Time does not destroy septic dirt."

Dr. S. Paine, of Texas, reported "A Case of Subserous Fibroid Tumor of the Uterus," in which the tumor had been materially reduced by large doses of ergot continued for a year.

Dr. George J. Engelmann, of St. Louis, called attention to *An Improved Technique in Gynæcological Operations, Major and Minor.* In his method he places the woman in the lithotomy position and substitutes for the carbolized spray irrigation by water (115°–125° F.), which may contain bichloride (1–2000) or carbolic acid. He uses semicircular needles and silk sutures, but no sponges whatever. He claims that the method is aseptic, simple, and easy. He also exhibited a new speculum of Simon.

Dr. T. M. Healy, of Cumberland, Maryland, read a description and exhibited a *New Speculum and a Vaginal Irrigator.* The former was a self-retaining Sims's with a sacral pad, and its application was shown upon a patient.

Dr. R. J. Nunn, of Savannah, Georgia, presented *The Multiple Speculum Uteri and an Improved Dressing Forceps*, and Dr. Orto, of Texas, and W. C. Wile, of Sandy Hook, Connecticut, each exhibited a *New Speculum Uteri.*

The Rôle of Bacteria in Parturition.—Dr. H. P. Marcy, of Boston, read a paper upon this subject from the stand-point of an expert

in bacteriology. He considers the process of parturition under normal conditions as physiological and therefore aseptic, and denounced antiseptic irrigation as meddlesome and even dangerous. When the labor is abnormal, a new feature is introduced and infection may easily supervene. In such cases the same antiseptic precautions should be taken as in surgical operations.

Vaginal Hysterectomy for Cancer was the title of a paper by A. Reeves Jackson, M.D., of Chicago, in which he reviewed the operation and its results, and declared it not a useful but a dangerous operation, and as such it is unjustifiable and ought to be abandoned. On the contrary, the so-called palliative operations upon the lower segment of the uterus are not only less fatal, but also more lasting in their good results, than the so-called radical operations.

The Ring of Bandl.—Dr. W. W. Jaggard, of Chicago, Illinois, read a paper in which he discussed the conflicting views which have been held with regard to the participation of the cervix uteri in the changes of the gravid uterus. He believes that the views of Bandl had been misrepresented. Without asserting positively that the internal os and the ring of Bandl are identical, he considered the weight of evidence to be in favor of this view.

Emmet's Operation: when shall it and when shall it not be performed? was the title of a paper by Dr. Gustav Zinke, of Cincinnati, who formulated his views as follows: "Admitting its propriety and utility, there only remains the question of operation.

"1. It was evident that the operation had been performed unnecessarily for symptoms similar to but other than those arising from lacerations of the cervix. Further, that it had been done imperfectly, even without preliminary treatment, in many more; and the failure to give relief, as reported by several, was due to those two causes.

"2. From our present knowledge we cannot at this time arrive at any definite conclusion, from the fact that many of the so-called consequences of lacerations of the cervix uteri are not settled beyond doubt.

"3. Every one engaged in this department should carefully select his cases, and try every known means to give relief before recourse is had to operation.

"4. The operation should never be performed *eo ipso* in cases of simple fissures or lacerations of the first and second degree.

"5. In cases of eversion and disease of the cervical or corporeal cavity, or both, although attended by hyperplasia and displacement, it had been observed that all the symptoms abated and the parts returned to their natural condition, and that no laceration was discoverable after alleviative measures were instituted which alone caused the parts to return to a normal condition.

"6. There were some cases of extensive laceration of the cervix that seldom gave rise to any inconvenience, and therefore an operation should be deferred until symptoms arose that called for its performance.

"7. The operation, although indicated, should never be performed until, by preparatory treatment, the parts had been brought into a healthy condition.

"8. Near and during the climacteric period the operation should be postponed as long as possible, and the patient not exposed to any risks, since in many cases all the symptoms subsided under proper treatment, and never returned, on account of senile involution.

"9. The operation is justifiable in cases of laceration of the third and fourth degree without complications, where there is a history of malignant disease in the family.

"10. The operation might be performed with perfect propriety in young women, as a preventive, if the laceration were bilateral and extended up to the cervico-vaginal junction or beyond it, even though there were no pathological changes: indeed, it seems to be the duty of every one who observes a lesion to that extent to urge the operation.

"11. The operation is justifiable in any degree of laceration, and in rare instances even in fissures, when there exists cicatricial tissue productive of reflex disturbances annoying in character and not tractable to any other treatment.

"12. The operation is absolutely indicated in all extensive tears of the os in which the cervix is everted, its mucous membrane and Nabothian follicles diseased, and especially if there is granular or cystic degeneration present, provided the parts have first been restored to a healthy condition by palliative treatment."

Dr. S. C. Gordon, of Portland, Maine, read a paper in which he considered *Reasons for and Results of Some Cases of Tait's Operation.* Dr. Gordon announced himself as an opponent of the views expressed by Spencer Wells at the International Medical Congress, that in no case should ovaries or tubes be removed except where the presence of actual disease can be demonstrated by digital exploration. On the contrary, the writer believed that an intelligent analysis of the symptoms together with a good history would generally be sufficient upon which to establish a diagnosis and exploratory incision. In a series of cases of nerve-disorders he had been able to detect and remove diseased ovaries, the removal of which gave marked relief. The amelioration in some cases has been rapid, in others gradual. The important lesions discovered were cystic and calcareous degeneration of the ovaries and closure of the tubes, with or without the formation of small cysts. In such cases often there is nothing like an abdominal tumor, as the organs may not be excessively increased in size. In all cases other methods of treatment should be faithfully

tried before resorting to operation. The only antiseptic used by the writer was hot water, and he reported remarkably good results.

Dr. B. E. Hadra, of San Antonio, Texas, presented a communication on *Intra-Peritoneal Adhesions considered in Relation to Battey's and Tait's Operations.* Dr. Hadra had found adhesions in a number of cases between the intestines and other viscera, and advised an examination of the intestines in all cases of abdominal section. After examining the uterus and adnexa, the hand should be used to search for other adhesions than those in the pelvic organs.

Several papers were presented and read by title, as follows: "On the Treatment of the Pedicle," by Thaddeus Reamy, M.D., of Cincinnati, Ohio; "Notes on Surgical Gynæcology," by Horatio Bigelow, M.D., Washington, District of Columbia; "The Uterine Stem in Flexions of the Uterus," by George B. Fundenberg, M.D., of Pittsburg, Pennsylvania; and a "Report of a Cæsarean Operation," by E. W. Judge, M.D., of Detroit, Michigan.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held April 16, 1885, A. JACOBI, M.D., President, in the chair.

It was announced that the Section on Neurology had organized, with Dr. L. Putzell, chairman, the meetings to take place the second Friday of each month; Dr. A. L. Loomis had been chosen chairman of the Section on Theory and Practice; Dr. E. G. Janeway had been appointed by the Council to deliver the anniversary address in November next; Dr. R. M. Henry had been appointed to read a memoir of the late Dr. Elsberg, and Dr. D. B. St. John Roosa to read a memoir of the late Dr. Little.

PRESENTATION OF THE PORTRAIT OF THE EX-PRESIDENT, FORDYCE BARKER, M.D., LL.D.

Dr. T. M. MARKOE had been selected to make the presentation by the generous givers, the Astors. The portrait was a beautiful oil-painting, representing the ex-President in his academic robes. The President, on behalf of the Academy, accepted the beautiful gift in a few well-chosen words, and, on motion, thanks were extended to the generous donors and to Dr. Markoe for his kind presentation.

ENDOMETRITIS FUNGOSA, ITS PATHOLOGY, DIAGNOSIS, AND TREATMENT.

Dr. JAMES B. HUNTER read the scientific paper of the evening, in which he first gave the early descriptions of endometritis fungosa and a bibliography. The size of the fungous growths Dr. Hunter had found seldom to exceed five millimetres; they existed in the cavity of the body, not in the cervix; they were not easily broken down with the finger, and the hemorrhage to which they gave rise was out of proportion to their number.

Three varieties had been spoken of by Dr. Mundé, but Dr. Hunter thought the so-called hyperplastic form of endometritis hardly came under the class of which he was speaking; and the difference between sessile and pedunculated fungosities was only a difference of form, and all fungosities consisted of a hypertrophy of the mucous membrane. Their abundant vascular supply and the large increase of the area of the mucous membrane they caused would account for the amount of hemorrhage.

As to their microscopical appearance, it was not sufficiently characteristic to enable the observer to say from a single fresh specimen whether or not the condition present was one of simple fungosities. Several specimens should be examined and the clinical history taken into account in making a diagnosis.

Symptomatology.—The chief symptom, and perhaps the only one, was menorrhagia. He had found pain to be rare as a consequence of fungosities, and as a rule the hemorrhage consisted in an increase of the normal menstrual flow, and especially in lengthening of the period. A long train of symptoms naturally followed, but in no way different from those common to anæmia from other causes. In some cases, instead of hemorrhage there was a constant sanious discharge, perhaps stained with blood, with loss of flesh and anæmia as if from loss of blood.

The growth of fungosities seemed to be the result generally of chronic congestion of the uterus from any cause, and was commonly found in cases of subinvolution. It seemed to result from a moderate amount of congestion, as in a long-continued mild form of endometritis, rather than from more severe or acute forms of disease. As far as he could ascertain, fungosities had no connection with gonorrhœa or syphilis. They developed usually during the child-bearing period, more especially between the years twenty-five and forty. One of the causes of hyperæmia of the uterus being fibroid tumors, fungosities were not infrequent in this condition, and might be the chief cause of hemorrhage.

The differential diagnosis should be made from benign and malignant tumors. Among the benign growths were submucous polypi, adenoma of the uterus (a rare affection), villous growths, and placental remains. Round-celled or diffuse sarcoma might be mistaken for fungosities. Epithelioma or medullary carcinoma of the body of the uterus was so different in its history and microscopical appearances that there was little danger of confusion. Dr. Hunter then gave the points of difference between fungosities and the aforementioned conditions, and dwelt somewhat

upon the appearances of sarcoma, a disease which he believed to exist in the body of the uterus more frequently than had until recently been supposed. If all the points in the clinical history and the microscopical appearances were taken into consideration, the differential diagnosis would not be very difficult.

The treatment of fungosities was very simple and satisfactory. To cure the condition which gave rise to the hyperæmia of the uterus, however, was difficult and often tedious, and each case must be treated according to its own indications.

Dilatation of the cervix was not necessary, for, being in a patulous state, it would admit the passage of the necessary instruments. The treatment consisted in first wiping the lining membrane with cotton on an applicator, and then curetting the entire surface carefully with the blunt curette. Having finished the curetting, the surface was again wiped with cotton, and Churchill's tincture of iodine applied, or, instead, carbolic acid. After this Dr. Hunter was in the habit of applying a light cotton tampon at the mouth of the cervix. The patient should be put to bed, and it might be necessary to give morphine should there be pain. The operation should be done after the administration of an anæsthetic, otherwise it would nearly always be painful. The patient should be warned not to expect immediate improvement, as it might not be until the second or third curetting that the menstrual flow would be diminished.

The contra-indications to the use of the curette were recent pelvic inflammation or parametritis, or where the uterus was so sensitive that it would not tolerate the passage of the sound. Such cases should be prepared by the abundant use of hot water, and should be watched. The blunt curette with a shank which could be easily bent rendered the treatment safe and efficient. Two sizes of the instrument should be at hand.

Dr. W. Gill Wylie took some exceptions to the statements in the paper. For instance, he agreed with the author that hemorrhage after curetting for fungosities of the uterus occurred but seldom, and for that reason he could not understand why a tampon should be employed. His feelings were strongly opposed to the use of the tampon wherever it could be avoided. We should have as free drainage as possible, and this could not be effected with the presence of a tampon in the vagina. He also dilated the cervix, in order to obtain plenty of room for the operation, using the dilator and not a tent. It also encouraged free after-drainage. Regarding the opposition to the sharp curette, he thought that Sims's curette was not properly appreciated. He did not regard it as sharp, although it was made of steel, and two sizes had been employed by Dr. Sims, with a particular form of rigid handle which enabled him to reach all portions of the cavity of the uterus with safety. He did not think that the blunt curette would enable one to remove all the fungosities, and it might finally be necessary to employ the Sims curette before a cure could be effected.

Dr. B. F. Mundé said, concerning his division of endometritis fungosa into three classes, that undoubtedly endometritis hyperplastica did sometimes exist, and it might follow upon endometritis polyposa. The symptom being the same (menorrhagia), the treatment should also be the same. He would treat endometritis fungosa by means directed against the pathological conditions in the inverse order of their occurrence. The conditions which led up to fungous growths were a lacerated cervix, subinvolution, chronic areolar hyperplasia, and hyperplastic endometritis in its various forms. First he would scrape out the uterus, removing the vegetations, apply iodine and antiphlogistic remedies, thus restoring the endometrium and body of the organ as far as possible to their normal condition, after which he would unite the lacerated cervix.

As regarded the symptoms, with rare exceptions menorrhagia was the universal symptom. Still, as Dr. Wylie had suggested, there might be amenorrhœa and then menorrhagia in the same case.

He had been a strong advocate of the blunt curette, but he must acknowledge that there were some cases in which a cure seemed to be effected only after the use of the sharp curette, the soft curette failing to remove the base of the growths. He would not, however, employ a sharp curette with a stiff handle, as it might possibly cause perforation. He would employ the blunt curette for diagnostic purposes.

There might be considerable hemorrhage after curetting, and, contrary to Dr. Wylie's advice, in such a case he would employ a tampon, removing it within forty-eight hours. Before tamponing the vagina he mopped out the cavity of the uterus and applied the tincture of iodine and iron. It might be necessary to repeat this application. As a rule, it was not necessary to dilate the cervix.

Dr. C. C. Lee agreed in the main with the statements of the paper. With regard to the symptomatology, usually it consisted in menorrhagia, but sometimes there existed metrorrhagia.

Concerning treatment, he generally put the patient through a course of preparatory treatment before proceeding to do curetting. He unhesitatingly placed himself on the side of Dr. Hunter as to the choice of a curette. He thought Sims's curette, except in the most skilful hands, was quite as likely to do harm as to do good, and he could see no reason why the sharp curette should be employed, even by skilful gynæcologists. In preparing

the patient for treatment he took the greatest pains to diminish the chances of secondary hemorrhage. He always used an anæsthetic if possible. He had never found it necessary to dilate the cervix. He washed the uterus first with a weak solution of carbolic acid, then used the blunt curette thoroughly; again washed out the cavity, and then applied a solution containing one part of a saturated solution of chromic acid, and four parts each of alcohol and strong tincture of iodine.

Dr. B. F. DAWSON also expressed himself as strongly in favor of the blunt curette as opposed to the use of the sharp curette. Sims's curette had caused serious accidents, even in the hands of experienced operators. It was unnecessary to dilate the internal os. He was strongly opposed to ferocious gynæcology.

Dr. HUNTER, in closing the discussion, said he used only a light tampon, not with the intention of preventing hemorrhage, but rather to encourage free drainage. He had not found it necessary to employ a tampon to stop hemorrhage. The small curette would pass wherever the sound would go, and it was consequently unnecessary to dilate. He regarded Sims's curette, with its rigid handles, as dangerous. He did not deny the existence of the form of endometritis spoken of by Dr. Mundé, but said it did not fall into the class mentioned in his paper. He was inclined to think that where hemorrhage occurred after curetting it was due to failure to remove all the fungosities. He attributed the absence of hemorrhage in his cases in part to the use of strong tincture of iodine.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held April 22, 1885, the President, JOHN A. WYETH, M.D., in the chair.

SCLERODERMA. (?)

Dr. H. J. BOLDT presented a young lady, aged 22 years, who since her fourteenth year had been troubled with a swelling of the lower limbs, the left one being the first to become affected. The swelling involved the limbs throughout their whole extent, was firmer than that usually connected with myxoderma, and less firm than scleroderma. The deep tissues seemed to be infiltrated. The swelling was increased by standing and walking, which gave rise to pain and excessive fatigue. There was no apparent disease of other organs. The patient had been seen by Billroth and a number of eminent physicians, who had not made a diagnosis. There was little or no varicosity.

The PRESIDENT thought the affection probably a neurosis.

Dr. CARPENTER had seen four or five similar cases, all in girls, and thought it a neurosis, and Dr. Jacobi had so classed it. Either the upper or the lower extremities might be affected.

DIFFUSE AND CIRCUMSCRIBED PRIMARY CARCINOMA OF THE LIVER.

Dr. WALDSTEIN presented under the microscope sections illustrating diffuse primary carcinoma of the liver in a man who had suffered from several symptoms, some of which pointed to cirrhosis of the liver. There was icterus. The post-mortem examination showed the liver to be of medium size, granular, the granulations rather larger and showing other differences from ordinary granular change. They were prominent, arranged in groups, the groups being connected by strings of the same grayish-white color. The edges of the liver sharp; the intervening tissue between the granulations was compressed; the acini were small, irregularly shaped, broader than usual, the centres small and pale. The parietal peritoneum contained several small nodules, resembling on section the granulations of the interior of the organ. The other organs were not affected. The microscopical examination showed that the disease was diffuse primary carcinoma of the liver, originating in the biliary ducts.

The second specimen consisted of the liver, containing a nodule larger than an English walnut, which showed on microscopic examination the characters of carcinoma. The appearances were like those in the first specimen, the difference being that in the present case the disease was a circumscribed primary carcinoma. Other organs were free. There had been marked jaundice. The gall-bladder contained grayish, viscid fluid, containing no evidences of the bile coloring-matter. The common and the cystic ducts were patent. Primary carcinoma of the liver was rare.

ANEURISM OF THE ARCH OF THE AORTA.

Dr. DIXON presented the heart with the arch of the aorta, the ascending, transverse, and descending portions being the seat of marked aneurismal dilatation. The patient had been healthy until about six months previous to death. At that time, while walking along the street, he was taken with vertigo, lost consciousness, and was conveyed to Bellevue Hospital. When he regained consciousness it was ascertained that there was paralysis of the left side, which, however, so far disappeared by the seventh day that he was able to walk about the wards. There was no return of the attack. Some months previous to his entrance to Charity Hospital he commenced to cough, lost appetite, and about two months prior to death became hoarse, his voice finally being reduced to a whisper, due to paresis of the left vocal cord. There was at no time sore throat or pain. The sputa became streaked with blood, and about a month prior to death he spat up nearly a wash-basin of blood. The veins

over the left side of the chest were very prominent. There was a heaving impulse over a large area below the clavicle, dulness, and a *bruit*. The patient died rather suddenly. At the autopsy the brain could not be examined. Both lungs were adherent to the pleura throughout, and were congested and œdematous. At the base of the left lung was a large amount of blood, which had broken down the lung-tissue. The heart was hypertrophied. The ascending, transverse, and descending portions of the aorta were enormously dilated, and presented the various stages of atheromatous degeneration. There was a minute opening through the walls of the aneurism, through which the hemorrhage had taken place, but it was difficult to conceive how it had caused sudden death.

The PRESIDENT referred to a case seen in Bellevue Hospital, in which there was a small perforation of the walls of an aneurism involving the thoracic aorta, death being gradual from internal hemorrhage.

Dr. THAYER referred to a case of aneurism involving primarily the sinus of Valsalva, and secondarily the arch, ulcerating through the pericardium and involving the ribs. Death occurred suddenly, but no perforation was found.

PERICARDITIS.

Dr. THAYER presented a heart with the thickened pericardium, in which the chief interest centred in the fact that frequent examinations were made during life of the præcordial region and a diagnosis of pericarditis could not be reached. The autopsy, however, showed distention of the pericardial sac with pus, and a thick layer of pyogenic membrane over the visceral surface. There was evidence of recent pneumonic process which had disappeared.

CHRONIC OTITIS MEDIA AND INTERNA.

Dr. HOLT presented a part of the petrous portion of the temporal bone removed from the body of a child four and a half years of age. He had seen the patient but once,—namely, on Friday, the day before its death. The child had had a discharge more or less profuse and continuous since the ninth month of age. On Wednesday prior to death it had been in usual health, but at that time the discharge ceased nearly altogether. Pain developed in the ear. The next day it was drowsy; complained of headache. There was slight fever. On Friday the temperature was 101° F., the pulse 120. The head was thrown slightly backward, and the muscles of the back of the neck were moderately rigid. There was no sign of abscess about the ear, although the tissues were somewhat swollen. The next morning the child asked to get up to urinate, and died rather suddenly. The post-mortem examination showed slight pachymeningitis externa, with a cavity in the petrous portion of the temporal bone containing about a drachm and a half of very foul pus. The cavity communicated with a sinus leading towards the mastoid process. The ossicles could not be recognized. The dura was slightly lifted over the abscess-cavity. There was slight caries of the bone. The brain and membranes other than just mentioned were not involved. The spleen was very large and firm, but was not the spleen of septicæmia. There was some pulmonary œdema. The cause of sudden death was not very evident, but Dr. Holt in his report ascribed it to œdema of the lungs and cardiac failure.

Dr. CARPENTER remarked that it was not very unusual for persons who were debilitated from some disease to develop œdema of the lungs and die suddenly.

Dr. BOLDT had seen two cases of pachymeningitis externa in which death took place suddenly from pulmonary œdema, the meningeal affection being very limited. It would seem, therefore, that there was some connection between the pachymeningitis and the pulmonary œdema, but just what that relation was he could not say. In one of the cases referred to, Dr. Janeway made the post-mortem examination.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 7, 1885.

The President, Dr. SHAKESPEARE, in the chair.

Case of abscess in the supra-renal capsules. Presented by EDWARD T. BRUEN, M.D.

THE accompanying specimens were removed from the body of Mary S., æt. 57, who died in the Philadelphia Hospital. Two weeks before death she was admitted to the medical ward, and within a few days a circumscribed swelling in the left femoral region developed into an extensive abscess. Death occurred apparently from septicæmia. No satisfactory previous history could be obtained.

Post-mortem examination disclosed left kidney one-third larger than normal, capsule quite adherent upon removal. The section showed a granulated surface pale and mottled. The pelvis of the kidney much dilated,—*i.e.*, general evidences of parenchymatous nephritis.

Supra-renal body very much enlarged, and closely united with the kidney by strong inflammatory adhesions. It was of the size and shape of a hen's egg. On section, showed cystic degeneration or softening of the medullary portion, the contents of the cyst being a thick, purulent, creamy liquid filled with cheesy particles.

The cortical portion shows fibroid thicken-

ing, forming a dense connective-tissue wall one-fourth to one-half inch in diameter.

The right kidney was of normal size, but showed similar changes to the left.

Right supra-renal body normal. Other abdominal organs normal. No peritonitis. Abdominal and other lymph-glands throughout the body normal. Thoracic organs normal.

On examination of left femoral region a large tumor was found. Upon section, pus exuded freely, and a large abscess was discovered between the extensors and adductors, and lying beneath the sartorius. The abscess extended into the hip-joint. The acetabulum and periosteum of the head of femur were eroded.

The comparative rarity of disease of the supra-renal body lends an interest to any lesions affecting it. Dr. Shakespeare has made some sections of the capsule of this tumor without finding any tubercular structure. There was no bronzing of the skin, nor any other symptoms than those naturally to be expected in association with a large abscess, such as was found in this case. These facts, together with the unilateral character of the lesion, incline me to consider this specimen as one of abscess in the supra-renal body.

Dr. O'HARA asked whether this might not be a surviving abscess left after the absorption of other pus-centres, as he thought sometimes occurred.

Dr. NANCREDE combated this novel view, contending that while fugitive visceral *congestions* sometimes occurred in pyæmia, which readily disappeared, as well as certain collections of white blood-cells in the thecæ of tendons and the bursæ contiguous to joints, yet he did not believe that septic emboli producing infarcts could be absorbed, as maintained by Dr. O'Hara. Besides, if this explanation were correct, the clinical history should indicate something of the sort, which it did not, the case being one of *septicæmia*, not pyæmia.

Dr. BRUEN said that there were one or two points of interest upon which he had not touched in the notes already read. The patient had led a dissipated life, having been brought into the hospital from one of the "slums" of the city. He had supposed that the woman had received some injury, such as a blow, which had given rise to the abscess in the groin, and she had died with symptoms of septicæmia. He had, therefore, regarded the abscess in the renal capsule as secondary. The localization of the pathological process in but one capsule, the absence of bronzing of the skin, vomiting, or vaso-motor disorder, separated the case from Addison's disease. Indeed, it may be said the *ensemble* of the latter disease was wanting. Cases of Addison's disease have been described as being associated with abscess, but the disease was always bilateral, and in association with a special train of symptoms and with the absence of other pathological processes in the system.

The most valuable compilation of cases of diseases of the supra-renal capsules up to the year 1866 could be found in the seventeenth volume of the Transactions of the London Pathological Society, one hundred and ninety-six cases having been collected by Dr. Greenhow.

Specimen of aneurism of the aorta, with rupture into the trachea in two places and perforation of the œsophagus. Presented by Dr. OSLER.

W. J., aged 54 years, colored, a teamster by occupation, and accustomed to do heavy work. He had been healthy and strong. No history of syphilis. In August, 1882, he began to suffer with pains in the chest and left shoulder, but he did not have any serious inconvenience until September, 1883, when he was attacked with cough and thoracic trouble, possibly pulmonary, which kept him in the house and in bed for several months. It was not until May of last year that he was able to work. Since July he has had at times attacks of shortness of breath with wheezing, and often at night has had to sit up in bed. Within the past three weeks the pains in the shoulder and down the left arm have become very severe, and the cough and shortness of breath have increased. Note on admission was as follows: Well-built man, face thin, general musculature good. Inspiration rough and noisy; expiration loud and harsh, and often accompanied by a brazen laryngeal cough. Respiration, 18 per minute; can rest in the recumbent position. On inspection, the left side of the neck is much flattened, especially above the clavicle, and the sterno-mastoid muscle on that side is evidently atrophied. Apex-beat visible in normal position. No abnormal pulsation; slight visible pulsation in vessels of neck. Palpation in the ordinary way negative, but on firm pressure with one palm on the upper bone of the sternum and the other on the back a distinct impulse can be felt, and the second sound is accentuated. Deep pressure reveals pulsation above sternum and behind left sterno-clavicular joint. Percussion reveals a slight area of dulness over left half of the manubrium sterni and beneath left sterno-clavicular joint. Heart-dulness not increased. Auscultation: heart-sounds clear. At sterno-clavicular joint, when the breath was held, there is a soft double murmur, the diastolic the louder, and the second sound seems markedly accentuated. These murmurs can be heard over the left carotid and in supra-sternal notch. The tugging at the trachea was marked on elevating the larynx. Pupils equal. The left radial pulse is smaller than the right, and is slightly retarded. Lungs negative; loud tracheal and bronchial stridor; no pressure-signs on either bronchus. Patient

expectorates much thin muco-serous fluid, which is blood-tinged, and at times there are more consistent sputa containing much blood. He was ordered to take twenty grains potassium iodide thrice daily, and to rest in bed; no restriction as to diet. Laryngoscopic examination showed that the left cord was immobile. Within three weeks he was greatly benefited as regards the pains, cough, and wheezing, and the blood had disappeared from the sputum. Throughout February he remained very well, having occasional attacks of spasmodic coughing at night, which were relieved by spts. ætheris comp. His general health improved, and he was allowed to go about the ward. Sputum occasionally tinged with blood.

On March 19 he was shown to the class, and the following changes noted. Slight increase in substernal dulness on firm percussion; more marked accentuation of second sound over this region; persistence of the double murmur, which was now also to be heard just to the right of the sternum and at the aortic cartilage, and at this point it was the loudest. No increase in the pulsation, but in certain lights a slight impulse at the upper part of the sternum was visible.

At the beginning of April he began to be more wheezy, the stridor was very marked, and the dyspnœa became urgent, so that he had to sit up in bed. Sometimes these attacks would come on suddenly. On the 3d and 4th the dyspnœa was severe, and he got much weaker. On the 5th and 6th he spat up some bright blood, but not in any great amount, and gradually sank, dying at 9.30 P.M. of the 6th.

The specimen (removed by Dr. Hamaker) shows an aneurism of the aortic arch, which occupied a position between the first bone of the sternum and the spine, very firm, solid, and about the size of an orange. The entire arch is dilated, but the sac of the aneurism involves especially the upper posterior part, and is lined with dense yellow fibrinous laminæ. The orifices of the innominate and left carotid are free; that of the left subclavian is considerably narrowed by atheromatous ridges. The great veins are not compressed. The left recurrent laryngeal passes round the sac, is much stretched, and looks thinned; the right is normal. The trachea is much compressed about the middle of its course, and the aneurism causes a marked bulging on the left side, where two perforations can be seen. The upper one, about six centimetres from the bifurcation, is only two or three millimetres in diameter, and the tissues about it are thickened, dark, and the mucosa somewhat fibroid. The lower orifice is smaller and looks more recent. Neither of these leads directly into the sac proper, but into a small pocket situated between the dense laminæ of fibrin and the thinned tracheal wall. On inspecting the œsophagus, an oval perforation was found seven centimetres from the cricoid cartilage, which communicated directly with the sac, but was partially blocked with fibrinous clots. The stomach was found distended with fresh clots, and there was much altered blood in the small intestines. Collapse and congestion of the bases were the only changes in the lungs. The heart was not hypertrophied; valves were normal; muscle-substance flabby and in a state of fatty degeneration and brown atrophy.

The points of interest in this case were the repeated bleedings, extending over several months, and the associated wasting of the muscles of left side of the neck. At first the bleeding was looked upon as an indication that erosion of the trachea had occurred, but subsequently it was thought more probable that it came from swollen mucosa at the site of the compression. No doubt the first supposition was the correct one, as the upper of the perforations had probably been the source of the bleeding, but the firm leathery clots effectually prevented any profuse hemorrhage. The final bleeding into the œsophagus also took place very slowly, probably during the last thirty-one hours of life, as there was dark, much-altered blood in the ileum. It is impossible to say upon what the atrophy of the neck-muscles depended, as no careful dissection was made of the nerves in that region: possibly the sympathetic was affected, but there was no difference of the pupils.

In reply to a question, Dr. Osler said that the iodide of potassium was given chiefly with a view of relieving the pains, and it had the desired effect.

Congenital abnormality of lung.

Dr. W. A. EDWARDS read an elaborate description of a specimen of the lungs where the right had four lobes. The paper was accompanied by a careful drawing of the specimen, which had unfortunately been destroyed by the evaporation of the preserving fluid.

Dr. OSLER asked whether there had been any dissection made of the bronchi and blood-vessels of the abnormal lobe.

Dr. EDWARDS replied that no very careful dissection had been made, as he wished to preserve so rare a specimen, but as far as his examination went he could see nothing abnormal.

Inflammation of knee-joint; amputation.

Dr. H. R. WHARTON presented a specimen removed by amputation from a patient in the University Hospital under the care of Prof. Ashhurst, which showed a marked degeneration of the knee-joint resulting from inflammation of that articulation.

The patient from whom this specimen was removed was a man aged 40 years, who three years before had received a slight in-

jury of the right knee, which caused him more or less trouble up to January, 1885. At this time, while at his work, he twisted the affected bone; this injury was followed by an attack of acute inflammation, which went on to suppuration and destruction of the cartilages. The patient, when admitted to the hospital, had a high temperature, profuse sweats, and a rapid and feeble pulse. His condition was so urgent that it was deemed advisable to remove the part by amputation rather than to make use of the more conservative operation, excision of the knee-joint.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MARCH 5, 1885.

(Continued from page 516.)

The President, B. F. BAER, M.D., in the chair.

THE PRESIDENT presented the specimen and read the following report of a rapidly-growing

PAPILLOMATOUS OVARIAN CYST.

Mrs. G., æt. 41, widow for eight years; has had eight children, the youngest is nine years old. She had always enjoyed robust health until September, 1884, three months before coming to him. At that time a slight metrorrhagia began without pain or other disturbance. Previous to that time her catamenial periods had been regular. In October she noticed that the lower portion of her abdomen was slightly enlarged a little to the left of the median line. She thought nothing of it then, but thought that she was growing fat. The hypogastrium, however, continued to distend, and she began to lose flesh. Her physician, Dr. H. R. Blair, of York, Pennsylvania, brought her to see him on January 3, 1885. Her abdomen was then as large as at the sixth month of gestation, symmetrically developed, perfectly smooth; dull on percussion over the distended portion, but resonant in flanks and epigastrium; and there was marked fluctuation. Dark, bloody discharge from uterus, not fetid. It was thought she was pregnant and that the metrorrhagia was due to threatened miscarriage. But she was losing flesh, and there were no rational or physical signs of pregnancy except abdominal enlargement. The uterus was slightly prolapsed and retroverted, rather softer than natural, os patulous, cervix granular. The sound entered two and a half inches. Uterus not easily moved, because of a mass pressing upon it from above. He diagnosticated a rapidly-growing ovarian cyst, and advised immediate operation, but she was not ready.

He saw her again on February 7. The tumor had increased to double the size it was at first examination, but it was still symmetrical and occupied the same relation to the uterus. She was losing flesh and strength. She now complained of pain all over anterior surface of abdomen, and her pulse and temperature were slightly elevated. She at no time suffered pain in the tumor.

On February 18 she entered his private hospital, having increased greatly in size during the intervening ten days. Circumference at umbilicus was forty-six inches; veins in abdominal wall were distended, and the tumor was still symmetrical and markedly fluctuating. Metrorrhagia had continued daily since its first appearance in September. She also suffered from dyspnœa. There was pain over abdominal surface as before. Urine normal.

Operation.—February 20, 11 A.M., assisted by Drs. D. J. M. Miller and J. C. Gabell, in the presence of Drs. A. R. Blair, J. W. Kerr, and F. B. Hazel. Incision, three inches; tumor almost universally adherent to anterior wall of abdomen and omentum, and very vascular. He passed his hand and separated adhesions, and then tapped the cyst: the fluid had the color and consistence of healthy pus, and was more than an ordinary wooden pailful in quantity. Solid portion of tumor, larger than the fœtal head at term, was delivered through the small incision. The tumor proved to be of the left ovary, and had a very short and vascular pedicle, which held it in close contact with the uterus. He then ligatured and amputated the omentum, and transfixed and ligated the pedicle with fine Chinese silk, cut it, and dropped it into the peritoneal cavity. The right ovary, being perfectly healthy, was not removed. The uterus was soft and congested. Peritoneum was purple from congestion, but there had been no ascitic fluid, and the peritoneal cavity was found almost free from liquid. Probably ten minutes were spent looking for bleeding vessels and finishing the *toilette* of the peritoneum. Abdominal wound was then closed with eight silk sutures.

The patient recovered from the anæsthetic without any evidence of shock (pulse 98°, temperature normal), and she continued to do well until the second day, in the evening of which her temperature reached 100° (its highest point); pulse 108 and strong. She complained of being tired, and looked wearied. She had not passed flatus from the anus, but there were occasional eructations of foul gas. There was no tympany and no pain, but at about 11 P.M. she vomited, or rather regurgitated, about a pint of very fetid, yellowish liquid, of a decidedly fæcal odor. The large quantity (she had not taken a teaspoonful of anything since the operation) and the odor, together with the fact that she had not passed flatus from the anus, caused him to suspect intestinal obstruction. Her temperature fell soon after this to 96°, and her pulse rose to 130 and became very weak. There was no pallor of countenance, and no distention of abdomen or Douglas's cul-de-sac, or he might have

thought this depression, bordering on collapse, was due to hemorrhage. Neither were there any symptoms of intestinal obstruction other than the apparent fæcal vomiting and the non-escape of flatus from the rectum.

Under the influence of active stimulus, by the rectum and hypodermically, she slowly rallied, but the temperature did not reach the normal point until the fifth day after the operation, when flatus began to escape from the rectum. Her recovery was rapid after this. The sutures were removed on the eighth day. Union complete and solid. She sat up on the thirteenth day. There has not been any bloody discharge from the uterus since the operation.

The tissues of the cyst-wall are very friable, and the internal surface is studded with an exuberant papillary growth, presenting an appearance not unlike cauliflower excrescence.

The very rapid growth of this tumor to the great size which it attained in five months, the constant metrorrhagia, and the character of the tumor place this case quite out of the usual course of development of ovarian cysts, and make it worthy of record. These are characteristics of malignant disease. Is this a malignant tumor? I think not in the sense that it will necessarily return, now that it has been removed before the cyst-wall had broken down and discharged its contents into the peritoneal cavity. This is the course of papillomatous ovarian cysts. But even when this has occurred and the peritoneum become involved, the disease may not return after removal. Some years ago he assisted Dr. Goodell in the removal of a papillary growth of the ovary in which the cyst had ruptured and discharged its contents into the peritoneal cavity. The peritoneum was greatly involved, being thickly studded at various points with hard papillary nodules. The patient recovered, and the disease did not return.

Dr. Emmett records a like experience. He says, "I have never regarded the condition as malignant in character or in any respect more than a benign growth accidental to ovarian tumors and accompanied by an ascitic accumulation" (ascites complicates a later stage of the disease than Dr. Baer's case had reached). "I have, however, sometimes observed in this supposed malignant disease that patients bore the shock of the operation badly and died from apparently trivial causes."*

It is probable that ovarian cysts of very rapid development often have this papillary character. One of the specimens which he had presented to this Society at its last meeting was of this description, though less marked, and it had attained a size of thirty pounds in nine months. It is also probable that the constitution is more profoundly affected by these growths than by the ordinary slow-growing ovarian cysts. For these reasons, operation should never be deferred in such tumors.

Dr. HARRIS inquired whether any microscopic examination of the tumor had been made. He always suspected malignancy in rapid growths, and in papillomatous tumors the decision cannot be made from appearances, as, of two such having the same apparent characters, one may prove to be malignant and the other benign.

Dr. GOODELL remarked that the question of malignancy in ovarian tumors was a most interesting one. As regards papillomatous cysts, Doran had divided them into two classes,—one springing from the hilum of the ovary and not necessarily malignant, while papillary growths in cysts of the broad ligament usually indicate malignancy. Some years ago he removed a collapsed papillomatous ovarian cyst upon which the late Dr. Hodge had refused to operate in consequence of supposed malignancy. It was complicated by ascites, and the peritoneal cavity had become infected with secondary growths; yet the woman got well, and has probably remained well.

On the other hand, benign-looking growths are sometimes malignant. For instance, he removed a large tumor having many adhesions; twenty-four ligatures were left in the abdominal cavity. It was wholly benign in appearance, and the patient got up and about; but soon she became oppressed by rapid breathing. Effusion into the right pleura was discovered, together with malignant growths affecting that cavity and scattered throughout the abdominal cavity. The tumor was evidently malignant, but it did not look so. In another case of apparently benign cyst, in which the clamp was used, menstruation occurred from the cicatrix, and later papilloma of the stump and abdomen sprouted out from the cicatrix, and the patient died. He said that all his cases of colloid tumors, three in number, have become malignant afterwards. In one case, five years after the first operation the second ovary became diseased, the sac burst, and the whole contents of the peritoneal cavity became infected. In another, two years after the removal of both ovaries the disease returned in the broad ligament, probably from the stump of the ovary. In another case the cicatrix burst open a few weeks after the operation, and a large papillomatous growth sprouted out, the lady dying soon after. Tait considered that among the causes of malignancy are tapping and delay in operating, the age of the cyst tending to malignancy. Dr. Goodell doubts if the microscope can distinguish between benign and malignant papillomata. Virchow states that, although benign at the beginning, they may become malignant in the later stages.

* Prin. and Prac. of Gynæcology, 3d ed., p. 683.

REVIEWS AND BOOK NOTICES.

MICRO-CHEMISTRY OF POISONS, INCLUDING THEIR PHYSIOLOGICAL, PATHOLOGICAL, AND LEGAL RELATIONS. With an Appendix on the Detection and Microscopic Discrimination of Blood. Adapted to the Use of the Medical Jurist, Physician, and General Chemist. By THEODORE G. WORMLEY, M.D., Ph.D., LL.D., etc. With Ninety-six Illustrations upon Steel. Second Edition. Philadelphia, J. B. Lippincott Company, 1885.

This work is so well known as a text-book that it is sufficient to simply make an announcement of a second edition, which has been thoroughly revised and enlarged by the addition of many illustrative cases, new tests, and recent methods of recovery of poisons from organic mixtures. There also have been added a new chapter on Gelsemium Poisoning, and an appendix on the Nature, Detection, and Microscopic Discrimination of Blood. We also notice as additional matter poisoning by potassium chlorate, post-mortem diffusion of arsenic, arsenic in medicines, in fabrics, and in glass; Dragendorff's method for the recovery of vegetable principles, and articles on the nature of ptomaines, and on the preparation, properties, and recovery of Jervine. The chemical nomenclature of the former edition has been entirely revised and made to conform with more recent views. The work is well printed, and is handsomely illustrated by sixteen steel-plate engravings, showing the microscopic appearances of various crystals, two of which are new. It is generally known that these are the skilful work of Mrs. Wormley, to whom the book is dedicated, except one, showing the relative size of blood-corpuscles from various animals as they appear under the microscope, which was contributed by Mrs. Marshall, the daughter of Prof. Wormley. They give character and add greatly to the interest and value of the work.

MISCELLANY.

THE RIGHT TO MANUFACTURE PEPTONE PEPSIN.—A recent trial before the Circuit Court of the United States has finally decided the right to make crystallized pepsin in favor of the inventor, Dr. Carl Jensen, of this city, who brought suit against a firm here for an infringement of his patented process of manufacture. In rendering its decision the Court said, "That the plaintiff's patented product, 'peptone pepsin,' is of great utility and patentable, is undoubted. The infringement is conclusively proved. The defence, that for more than two years prior to the patentee's application this article had been exposed to sale, and, second, that it had been described in certain publications, is not sustained by proof. No such article is shown to have been on sale, and no such process as employed by the plaintiff, or article manufactured by him, is shown to have been thus described.

"Pepsin had been manufactured and sold for many years, but no 'peptone pepsin,' such as this patent describes. The publications relied upon show nothing more than suggestions and speculations of scientific writers, who had never tested the practicability of their suggestions or demonstrated the truth or value of their speculations."

THE AMERICAN CLIMATOLOGICAL ASSOCIATION held its second annual session in New York, May 27 and 28. A handsome reception was tendered by the New York members to the non-resident members on the 28th instant.

THE INDIAN MEDICAL GAZETTE has recently experienced a change of ownership, but does not show any sign of deterioration. It is a well-conducted journal, which evidently deserves and enjoys success.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 10, 1885, *TO MAY* 23, 1885.

LIEUTENANT-COLONEL EDWARD P. VOLLUM, SURGEON.—Granted leave of absence for three months, to take effect when his services can be spared by his department commander. S. O. 110, A. G. O., May 14, 1885.

A BOARD OF MEDICAL OFFICERS, to consist of LIEUTENANT-COLONEL A. K. SMITH, Surgeon; MAJOR J. C. G. HAPPERSETT, Surgeon; CAPTAIN JAMES P. KIMBALL, Assistant-Surgeon, appointed to assemble at U.S. Military Academy, West Point, New York, on June 1, 1885, to examine into the physical qualifications of the members of the graduating class and the candidates for admission to the Academy. S. O. 106, A. G. O., May 9, 1885.

MAJOR JAMES C. MCKEE, SURGEON.—Sick-leave of absence still further extended four months, on surgeon's certificate of disability. S. O. 105, A. G. O., May 8, 1885.

MAJOR JUSTUS M BROWN, SURGEON.—From Department of the East to Department of the Platte.

CAPTAIN CALVIN DE WITT, ASSISTANT-SURGEON.—Ordered to Department of the East.
S. O. 105, A. G. O., May 8, 1885.

CAPTAIN JOSEPH K CORSON, ASSISTANT-SURGEON.—Leave of absence extended ten days. S. O. 109, A. G. O., May 13, 1885.

CAPTAIN A. A. DE LOFFRE, ASSISTANT-SURGEON.—Assigned to duty at Fort Sisseton, Dakota Territory. S. O. 46, Department of Dakota, May 4, 1885.

CAPTAIN A. A. DE LOFFRE, ASSISTANT-SURGEON.—Relieved from duty at Fort Sisseton, Dakota Territory, and ordered to Fort Totten, Dakota Territory. S. O. 52, Department of Dakota, May 14, 1885.

CAPTAIN LOUIS BRECHEMIN, ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Omaha, Nebraska. S. O. 44, Department of the Platte, May 18, 1885.

CAPTAIN JOHN J. KANE, ASSISTANT-SURGEON.—Leave of absence for seven days extended one month. S. O. 109, A. G. O., May 13, 1885.

FIRST-LIEUTENANT E. C. CARTER, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 106, A. G. O., May 9, 1885.

FIRST-LIEUTENANT BENJAMIN MUNDAY, ASSISTANT-SURGEON.—Relieved from duty at Fort Klamath, Oregon, and ordered to Fort Walla Walla, Washington Territory. S. O. 72, Department of Colorado, May 12, 1885.

PHILADELPHIA, JUNE 13, 1885.

ORIGINAL COMMUNICATIONS.

CASE OF TYPHOID FEVER COMPLICATED BY TETANUS, WITH A BRIEF REVIEW OF OTHER RECORDED CASES OF THIS COMPLICATION.

BY HENRY M. FISHER, M.D.,

Attending Physician to the Episcopal Hospital of Philadelphia, etc.

S. C., æt. 34, colored, had for about a week before my first visit to him experienced irregular chills, slight epistaxis, and sore throat, and had been languid and restless at night. I was called to see him March 21, 1884. I found that he had high fever (temperature 105° F.) and that there was much tympanites, but was told that he was decidedly constipated. At the time of my visit his nose was bleeding freely. Ordered cinchoninæ sulphat. gr. x at 7 and 9 A.M., and acid. muriatic. dilut. gtt. v every three hours.

March 22.—Pulse 100; temperature 105°. Tympanites undiminished. Very free epistaxis.

March 23.—Pulse 92, and weak; temperature 102.2°; tongue moist; mild delirium. Says that he sees "horses, dogs, and elephants." Epistaxis continues, and he has had some vomiting; abdominal wall tender to the touch; splenic dulness obscured by extreme tympanites; no movement of the bowels. Ordered calomel, gr. vi, and for muriatic acid substituted acid. carbolic. liq., f℥i, tr. iodin., f℥ij,—to be given in drop doses every two hours.

March 24.—Pulse 96, and fuller; temperature 103°. Complains of much abdominal pain. The calomel did not operate, and his intestines are greatly distended with gas. Very free epistaxis last night. Ordered calomel, gr. vii, sodii bicarb., gr. x, and increased dose of iodine and carbolic acid to two drops.

March 25.—After an injection, yesterday evening patient's bowels were moved six times. He was less delirious during the night. Temperature 104.3°. Marked increase in hepatic and splenic dulness. Tongue still moist, but lips dry. Ordered cinchoninæ sulphat. gr. xv at 5 and 7 A.M.

March 26.—Pulse 92; temperature 102.4°. Marked double vision this morning, and had muttering delirium during the night. No further movement of the bowels. Abdominal pain still complained of. Calomel and soda repeated, and ordered quininæ sulphat. gr. viii at 4, 4.30, and 5 A.M.

March 27.—Pulse 88; temperature 102.8°. Expectorated some blood this morning, which appeared, however, to have come from posterior nares. Calomel again failed to operate. Appetite has improved.

March 28.—Was called to see patient at 6 A.M., and found that for about two hours he had been in convulsions. Pulse 84; temperature 99.2°; respirations about 10 in minute, and breathing of Cheyne-Stokes type,—one long, sighing respiration being followed by several shorter and shallower ones. There is complete unconsciousness, with marked clonic spasm of the muscles of the upper extremity and of the facial muscles, with only slight intervals of comparative muscular relaxation. There was very decided tonic rigidity of the masseter muscles (trismus). Applied cold to the head by means of Leiter's tubes, and directed the cap to be kept constantly applied. Four hours later his condition had changed very little, except that the paroxysms were even more violent. His eyes were wide open, and he had a startled, frightened look, but appeared to be almost if not quite unconscious. There was marked opisthotonus. His jaws could not be separated sufficiently to introduce food or medicine by the mouth, so I ordered him milk and beef-tea per anum, also chloral hydrat. gr. xx every three hours by enema. I also directed two ounces of blood to be removed by leeches applied to each mastoid process.

In the afternoon I found him somewhat quieter, and was told that he had slept a little. The tetanic contractions were still, however, very marked. Gave atropinæ sulph. gr. $\frac{1}{100}$ hypodermically.

March 29.—Slept a little last night, and this morning consciousness has returned and all the tetanic rigidity and spasmodic movement have passed away. Leiter's tubes were removed, having been used for twenty-four hours with hardly any interruption. His temperature was normal or subnormal, and after this there was no further febrile reaction. His strength returned slowly, and he was very nervous and irritable for several weeks. In six weeks or two months, however, he was able to return to work.

Among the nervous complications of typhoid fever tetanus would appear to be one of the rarest. Very frequently it is observed that tonic spasm or rigidity affects certain groups of muscles in the course of the disease; but general tetanic paroxysms are seldom observed, or at least have been seldom noted.

Duchek* reports a case of typhoid fever in which there was hyperæsthesia of the entire cutaneous surface, slight ptosis of the right eyelid and dilatation of the right pupil, fibrillar twitchings of the facial muscles, deviation of the tongue, and

* Wochenblatt der k. k. Gesellschaft der Aerzte, September 12, 1866.

tonic spasm of the cervical muscles, at first confined to the right side. Later, trismus and opisthotonus occurred. Death occurred on the fourteenth day of the disease.

Girerd's* case occurred during apparent convalescence from a severe attack of typhoid fever. On the *thirty-fifth day* from the onset of the disease severe epistaxis occurred. This was followed by paresis of the right side of the body and "paralysis of the pharynx." The patient presented tonic contractions of the facial, dorsal, and abdominal muscles. He was treated by galvanism to the spine and chloral by enemata, and appeared to be improving, when, through some mistake, a toxic dose of morphine was given him, and he fell into a comatose condition and died on the seventh day after the first occurrence of the tetanic symptoms.

Simoneau † records one fatal case; and Fussell ‡ records one in a girl of 18 during convalescence in the third week, and another case, in which tetanic convulsions occurred,—also during the third week,—which ended in recovery. J. Fowler § records a similar fatal case, which was ushered in by profuse epistaxis. Dieterlen || records the case of a child who presented, on the fourteenth day of an attack of typhoid fever, stiffness of the limbs and neck, and on the fifteenth tetanic rigidity of the whole body. On the twenty-first day general convulsions set in (epileptiform), attended with a fall in temperature. These convulsions recurred on several successive days, but the child ultimately recovered.

Riberolles ¶ records a case of a patient who, on the twentieth day of an attack of typhoid fever, was seized with violent delirium, stiffness, and pain on pressure over the muscles of the back and neck, and who developed on the thirtieth day marked opisthotonus, attended with "choreic movements of the lips and hands." With the onset of the opisthotonus a sudden fall of temperature was noted (from 104.6° F. to 98.2° F.). The day following, there was marked spasm of the facial muscles; his pupils, which had been dilated, became contracted, and he died in a state of profound coma. The autopsy revealed ulcerations of Peyer's patches in process of cicatrization, engorgement of the cerebral sinuses and of the vessels of the dura mater, thickening of the arachnoid, three or four reddish patches (ecchymoses) on the surface of the brain, with effusion of fluid into the ventricles, thickening and opacity of the membranes of the cord, with reddish patches on its surface, as well as on that of the medulla oblongata. There were also signs of congestion of the substance of the spinal marrow and medulla oblongata.

It will be noticed that in the case just mentioned, as in my case, the tetanic spasm was ushered in by subsidence of the fever. Liebermeister has called attention to this great depression of the body-temperature which often attends the development of severe nervous complications in the course of typhoid fever, particularly when they occur at about the middle of the second or beginning of the third week. He attributes this phenomenon to an excessive irritation of the heat-controlling centres; but undue stimulation of the vaso-motor nerves, inducing contraction of peripheral blood-vessels, might also, I think, account for it. In the case of Riberolles there was inflammation of the spinal as well as of the cerebral meninges, and congestion of the substance of the cord and medulla oblongata. This is the only observation that I have been able to find of the condition of the cord and its membranes in a case of typhoid fever which was complicated by convulsions of tetanic type. It seems probable, however, that in all such cases which ended fatally we should find marked evidences of *spinal* meningitis, or at least of *congestion* of the *spinal* meninges. We may, of course, call *reflex irritation* to our aid to explain the development of the tetanic spasm in these cases. We have a central nervous system already in a state of abnormal irritability, and we have a localized lesion in the intestinal ulceration. If, however, this intestinal ulceration were really the exciting cause, we should, I think, expect to see the spasm developed at a much earlier period of the disease than is usually the case, and not at the stage when, in the great majority of cases, the intestinal ulcers are beginning to heal.

* Revue de Médecine et Pharmacie de l'Empire Ottoman. Constantinople, 1876–77, ii. 770–881.
† Journal de Médecine de l'Ouest, Nantes, 1882.
‡ Philadelphia Medical Times, xiii. p. 263, 1882–83.
§ Buffalo Med. and Surg. Journal, 1881, xx.
|| Revue Médicale de l'Est, Nancy, April 1, 1884.
¶ Contributions à l'Étude des Phénomènes nerveux de la Fièvre typhöide, leurs Rapports avec la Température. Thèse de Paris, 1884.

Congestion of the cerebral meninges is known to be of common occurrence in the course of typhoid fever. Hoffmann found evidences of mild inflammatory action ("apparent increase in subarachnoidal exudation") in ninety-two out of one hundred and sixty-six cases; "moderate hyperæmia of the pia and arachnoid" in thirty-six; while signs of *intense hyperæmia* with purulent exudation (acute meningitis) were present in only four. And when we consider how much the heart is enfeebled by the long continuance of the fever, we need not be surprised at the frequency of passive congestion. In the general muscular degeneration the unstriped muscular fibres of the blood-vessels also share. The epistaxis which is so constant an accompaniment of the invasion-stage of typhoid fever must be looked upon as an indication of congestion, and when long continued and profuse it should arouse our fears of serious congestions of internal organs, and particularly of the brain.

That a congestion of the *spinal* meninges sufficiently severe to give rise to a high grade of sensory and motor disturbance—spasm, hyperæsthesia, etc.—should set in with great suddenness and disappear as rapidly as it occurred is a supposition to which the well-known severe pulmonary congestions of short duration afford some support, and the gratifying results of the treatment based on this view of the complication appear to give further confirmation to it.

It would be interesting to know whether the negro race, which seems so predisposed to tetanus from traumatic causes, is also peculiarly liable to this complication in typhoid fever. I have not, however, been able to find any previous record of its occurrence in the negro as a complication to this disease.

A CASE OF DERMOID OR PILIFEROUS TUMOR, WITH CURE BY SPONTANEOUS OPENING INTO THE INTESTINE.

BY WALTER F. ATLEE, M.D.

Read before the College of Physicians of Philadelphia, March 4, 1885.

M. C., residing in this city, came to me in May, 1884, on account of a lump she had that day discovered in the lower part of the belly. She was 32 years of age, of medium size, with the appearance of good health. Her menses always came regularly every four weeks, never were profuse, and, as a general rule, lasted but two days.

This lump appeared to be egg-shaped, the long diameter in the direction of the spinal column, in size perhaps six inches in its greatest length, and placed rather above the womb, and somewhat to the left of the median line. She complained of pain and of obstruction to the passage of the stool. For this condition the use of a pill composed of opium and of the compound extract of colocynth was advised. A few days afterwards, on account of complaint of difficulty in passing the urine, a drink of bitartrate of potassa was recommended for use. In July, on account of troubles of digestion, bismuth and strychnine were prescribed, to be used before meals, and pills of carbonate of iron to be taken after. Early in September pills of ergotin were ordered, and their use was continued again in October and in November and December. During this time the lump appeared to be growing rather smaller, and it was certainly becoming softer. On the 11th of November a considerable quantity of matter like thick gruel, white, and with no odor, came away from the bowel. This, under the microscope, was seen to be composed of the exfoliated epithelial cells and the secretion from sebaceous glands. This continued to come from time to time, and as it did, the lump became smaller. On the 10th of January hair began to come, some of it long and very black, and the most of it of a light brown, and but four or five inches in length.* On the 16th of January the matters that came away were very small in quantity, greenish in color, and of a very bad odor. Since that time there has been nothing of notice in the discharges from the bowels, except twice a slight quantity of blood. There is now no sign of the tumor.

These dermoid or piliferous tumors are interesting, surgically, from the obscurity they throw over diagnosis, and in the complications they occasion. In the case just related, the tumor was believed to be a uterine fibroid for several months,—in fact, until it was observed to become quite

* A considerable quantity of this hair was shown to the College.

soft, from hard, as it had always been before. In a pathological point of view their interest is very great indeed, and also in one of comparative physiology. By far the larger number of dermoid cysts —indeed, the immense majority of them —are ovarian; but no matter in what part of the body they may be found, or what may be the sex of the patient, the doctrine of "the continuous development of tissues out of one another," as Virchow calls it, will suffice to account for the growth of all ordinary dermoid or piliferous tumors. Inherent in the tissues of the body is a peculiar formative and reproductive power, and it operates in the production of these strange tumors, as it does in the large number of multiform morbid growths which spring up everywhere under circumstances impossible for us to explain.

In ovarian morbid growths the kind of tumor that is formed depends upon the strength of the formative impulse. In ordinary cases, the force of formative power goes no further than the production of cyst-walls with a secreting endothelium which pours out fluid contents. In some cases the cell-growth is enormous, and yet there is no disposition to organization, and piliferous excrescences, cancerous and colloid masses, show themselves. In others, again, imperfect attempts at organization are seen, as in those called dermoid or piliferous, on account of what is most usually found in them.

The origin of all these cysts is traced, indirectly by way of exclusion, and directly by way of observation, to the development of the ovisacs or Graaffian vesicles; and, when we consider what these ovisacs are, we need never be surprised at the contents of these cysts, and at the abundance, the nature, and the variety of these contents. When skin, hair, teeth, and so on, are met with, it is quite in accordance with known facts in comparative physiology to look upon tumors containing them as imperfect attempts at organization arising from the powerful germinative aptitude of the ovary. The formation of imperfect tissues is reached without ever going so far as the formation of an organ, let alone that of an organism. Such formations may be looked upon as examples of parthenogenesis, as imperfect vestiges in the higher animals of a regular physiological act in some of the lower ones.

THE PROBLEM OF ACCLIMATIZATION.*

BY ISAAC HULL PLATT, M.D.,
Brooklyn, New York.

THE question of acclimatization, though a long-vexed one, and one which has attracted much attention from the standpoint of the biologist, the anthropologist, and the physician, has never been satisfactorily answered. This is doubtless to a great extent due to the fact that it has never been approached in the light which the advances of recent years in the fields of biology and anthropology are capable of affording.

While some students of the subject have claimed that all animals and plants are capable of becoming gradually adapted to new climatic surroundings, and that the human race most readily and thoroughly submits to such modification, others have maintained that man is totally incapable of acclimatization, and have been most emphatic in their protest against the possibility of such process as applied to malarial and endemic fevers. Knox even went so far as to avow the opinion that the European races in America and elsewhere would become extinct if not continually replenished by immigration. Probably nobody at the present day would go to this extreme; but Parkes in his "Practical Hygiene," and many others, take the ground that as a general principle acclimatization of the human race is impossible.

Common experience certainly seems opposed to this view. Every one who has travelled must have observed that even in undergoing slight changes in atmospheric and telluric influences, slight disturbances are produced which rapidly pass off as one becomes accustomed to his new habitat; and all know as matter of history that great and powerful peoples have grown up in lands new to their races and which at first proved injurious to them.

The fact to which Dr. Westbrook called attention in his paper before this Association last year—namely, that immigrants and their children, especially the Irish, are peculiarly prone to pulmonary phthisis —is one which all physicians practising in the large cities must have observed; and yet in a few years their descendants show no special susceptibility to that disease.

* Abstract of a paper read before the American Climatological Society, New York, May 28, 1885.

Our entire fifty millions of population are the descendants of immigrants, and yet as a people we are no more subject to pulmonary diseases than the inhabitants of many European states.

The general subject of acclimatization is ably discussed by Mr. Alfred Russel Wallace, in the "Encyclopædia Britannica" (ninth ed.). The definition there given is "the gradual adaptation of plants to unaccustomed climatic influences, which are at first injurious to them."

The definition is important, because, when brought to this test, much of the argument on the negative side of the subject will be found to have no application. Mr. Wallace quotes from notes furnished him by Dr. Richard Spence, who resided many years in South America, to prove the perfect acclimatization of the Spanish race in Peru, in some portions of which there reside populations of strong, stalwart men and handsome women, remarkably exempt from disease, in a climate where the thermometer for months at a time rarely falls below eighty degrees, even at night. Dr. Spence's notes also show instances of different portions of the same race of Indians, one of which had become accustomed to the rare, cool atmosphere of the great altitudes of the Sierras, another to the tropic heat of the plains, yet either transported to an intermediate climate would sicken and die. The colonization of Algeria by the French is an interesting case in point. When, after the conquest, the first attempts at colonization were made, they were met by a most signal lack of success. The immigrants died in great numbers, and the births were comparatively few. The attempt at founding a colony was almost despaired of, but after a few generations the tide turned, the births exceeded the deaths, and recent censuses show a great increase of the native population of European descent.

If we admit the principle of evolution, that of adaptation to climate must follow as a corollary.

"The broadest and most complete definition of life," says Herbert Spencer, "will be the continuous adaptation of internal relations to external relations;" and he shows that any organism subjected to new conditions will, if the change be not so sudden and severe as to end its life, gradually undergo such modifications of function and structure as to fit it for its new environment. The elements which go to make up what we know as climate are so numerous and diverse that we may, as applied to the human race, practically regard the terms as coextensive, and acclimatization may be regarded as but a phase of adaptation to environment, which Spencer has shown to be the fundamental law of biology.

Admitting, then, that acclimatization does take place, it will present itself in two phases, as applied to the individual and to races. As students of climatology, and, as all physicians must be to some extent, as anthropologists, the ethnic aspect of the subject has its interest for us, but as practitioners the matter of individual acclimatization is of more vital importance.

When we come to consider the anatomical and physiological changes by which the adaptive changes are brought about, we are met by the difficulty that we are dealing with problems of which we are not in possession of sufficient data to solve, owing to our yet imperfect knowledge of the profounder questions of physiology; and all we can hope to do is to discover a harmony with general principles, and to suggest a few of the lines upon which the changes will be worked out. Suppose, for instance, a person goes from a cool or temperate climate to a warmer one: the organism is deranged, for the reason that the balance between the functions of the various organs is disturbed,—the skin, for instance, being called upon for increased work, the lungs and kidneys for less than usual; but upon the same principle that a muscle increases by use, or the eye or the hand becomes trained to new employments, those organs which are subjected to an increased demand for functional activity will undergo a process of growth and development to enable them to meet their new conditions. At the same time the organs from which less is demanded will be the subjects of corresponding involution, and the balance will gradually be restored.

When we consider the subject of the acclimatization of races, the principle of natural selection becomes an important factor, for it is obvious that if the race is placed under new and unfavorable conditions it will only be those individuals most fitted by accidental characteristics or by the process of individual adaptation who will survive and propagate the race in its

full vigor: their descendants inheriting the peculiarities of their ancestors and undergoing further adaptive modifications, the race will continue down the generations the harmonizing changes.

It has been argued against the principle of acclimatization that, in case any portion of a race of people is removed to a climate widely differing from their own, the principle of reproduction becomes so greatly diminished that the race must gradually die out. This, while partly true, will prove upon examination not to be an obstacle to acclimatization, but an important factor in bringing it about. To a certain extent the function of reproduction is the evidence of a surplus vitality over and above that required to maintain the life of the individual, and anything which diminishes the vitality of a race will first affect its reproductive power. Of course, if the deleterious change is sufficient to destroy this power, extinction of the race will ensue; but if the power be only limited, this very limitation, by permitting the race to be propagated only from its hardiest members or those best fitted to its new surroundings, will add a new force to those acting in the cause of adaptation.

We have seen that natural selection is an important factor in bringing about the acclimatization of a race; but may not the same principle apply to the case of an individual? In one sense an individual may be considered as a highly complex community, composed of innumerable protoplasmic elements, each of which lives its individual life, absorbs, excretes, performs its function in the animal economy, and dies. Now, if these biological elements differ from each other, in no matter how small a degree, some of them must be better fitted to a new environment than others, and consequently will propagate more freely, and the organs and the organism itself will become correspondingly modified.

It has not been my intention to do more than to suggest some of the problems connected with this subject, and the lines on which they should be worked out. To attempt more would lead us into an unexplored domain of physiology. A full understanding of the subject would demand the investigation of the action of the various elements of climate upon each of the many functions of the human body and their reactions upon each other, and upon the structure of the organs.

It is very evident, and becoming more so every day, that in the forces which go to make up climate we have at our disposal not one but a host of agents, valuable for good if rightly used, but, like all therapeutic agents, capable of harm if applied without understanding. The subject of climatology is thus seen to be of the highest importance, for it affects not only the health of the individual but the advancement and development of the human race.

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

(Continued from page 648.)

THE SURGERY OF SCROFULOUS GLANDS.

MR. T. PRIDGIN TEALE (*London Medical Times*, January 10–17, 1885) insists on the absolute inutility of merely incising or otherwise opening an abscess dependent upon a degenerate gland unless that gland itself be removed. The visible abscess in some cases is merely a subcutaneous storage-reservoir of pus, while the suppurating gland may lie deep below, only connected with the abscess by a narrow sinus. Suppuration of this kind, though long existing, may be brought to an end in the course of a very few weeks if the source of it be recognized and vigorously attacked. The mark left by surgical interference is insignificant compared to the ugly scar which may result from a sinus allowed to heal at its own leisure after discharging it may be for months or years. In some cases septic poisoning, reducing the vitality of the patient, may be entirely removed by such an operation. Mr. Teale also advocates the removal of enlarged glands before suppuration has taken place, not merely to prevent septic infection, but in order to get a better scar than can be obtained where the skin has been damaged by inflammation and thinning. He sums up his conclusions as follows:

1. Whenever septic material is contained in the system we should not rest until it is expelled and its burrows laid open and disinfected.

2. In a large number of cases of scrofulous neck there is no evidence of constitutional taint or weakness. Health may be restored to perfect vigor in many cases

by the destruction of all degenerate or septic material. Further enlargement of glands rarely follows the removal of the condemned ones.

3. Surgical interference is not only justifiable, but is demanded, (*a*) whenever a sinus resulting from a degenerating lymphatic gland exists; (*b*) whenever fluid—*i.e.*, pus—can be detected in connection with an enlarged lymphatic gland; (*c*) whenever there are enlarged glands accessible to surgery in a patient in whom a caseous or a suppurating gland has been already discovered.

4. Glands not caseous or suppurating, but which are an eyesore, may or may not be removed. The cautery-puncture of Treves ("Scrofula and its Gland-Diseases," p. 193) may in some instances prove the best method of treatment.

In dealing with a sinus, the channel should be enlarged by the knife or by a Bigelow's dilator, and the whole of its granulating surface scraped off. When a sinus is shallow, and covered by thin blue skin, this imperfect covering should be rasped away by the scraper, and any cutaneous overhanging edges should be trimmed off by scissors.

In dealing with a sinus or abscess, the surgeon should not rest content until he has discovered and eradicated the gland, always remembering that, if it be not obvious, there is sure to be a small track leading through the deep fascia to the missing gland. This opening should be enlarged so as to admit the spoon of Lister's scraper.

When a gland has not suppurated and is movable, it can be removed by very little dissection, almost by enucleation. The resulting scar is insignificant.

When a gland has suppurated, and generally when it has become caseous, the capsule should be freely opened and the contents should be eviscerated by Lister's scraper. If the stump of gland adherent to the capsule is too tough for scraping, it may be dissected away by the scalpel, if the risk of injuring important structures be not too great.

Sometimes further exploration shows neighboring glands which can be removed through the same opening.

As to after-treatment, the cavity, having been well cleansed by carbolic-acid solution (1 in 40) or by carbolized glycerin (1 in 10), is charged with iodoform. An india-rubber drainage-tube, reaching to the farthermost recess, is fixed to one extremity of the wound, the edges of which are carefully and accurately brought together by fine catgut suture. The wound may then be covered with a pad of salicylic silk, or some other absorbent antiseptic substance. At the end of a week the india-rubber drainage-tube should be replaced by one of gilt wire, which should remain there until there is reason to suppose that all is healed except the track of the tube. This period will vary from three to eight or ten weeks. The effectiveness of the scraping is much aided by the form of the scraper. Mr. Teale prefers Lister's to Volkmann's, and pictures several sorts, as well as the Bigelow's dilators above mentioned.

HEMORRHAGIC ERYTHEMA IN A CASE OF BLENNORRHAGIC RHEUMATISM.

Feulard (*La France Médicale*, No. 31, 1885) gives the case of a man, 21 years of age, in apparent good general health, but who had suffered from malaise, and loss of appetite and sleep, for several weeks. This person was taken, on the afternoon of the 21st of January, with pains through the body, most severe in the calves, neck, and head, with sore throat and slight diarrhœa. That night he did not sleep, and the next day he entered the hospital covered with an eruption which on the trunk and limbs was composed of disseminated, small, round lesions, some bright red, erythematous, and disappearing under the pressure of the finger. Other lesions were dark red, hemorrhagic, and exactly resembling the lesions of purpura. At two or three points were true ecchymoses. These lesions were not raised above the surface: they were few in number on the face, but plentifully distributed over the abdomen. There was no tendency to greater numbers of lesions over the articulations, but they tended to a circinate grouping in places. The eyes were injected, the conjunctivæ ecchymotic, the buccal mucous membrane, the velum, and the pharynx were covered with analogous lesions. There was no bleeding from the gums, the temperature was 95.3°, and the urine contained a trace of albumen. The articulations were intact, except that the right knee contained a slight serous effusion. The heart and lungs were normal. There was a slight discharge from the

urethra, but the patient had taken no medicine for this.

The patient was under observation for several days, during the first of which no change took place except that the old skin-lesions began to fade, while new ones took their place. At the end of this time the patient complained of pain in the left hand, the metacarpo-phalangeal joints of which were tumefied and red. The next day the left testicle was swollen, red, and painful. Without the epididymis being affected, the entire gland was enlarged. The eruption faded by degrees. The evening temperature was slightly elevated. Within a few days the swelling had passed to the left testicle, while the right had gone down, but there was no epididymitis. The discharge from the urethra was mucous. At the end of ten days from the original attack the patient was well.

HEREDITARY DERMATITIS BULLOSA AND HEREDITARY ŒDEMA.

Under this designation Dr. A. Valentin, of Berne (*Berlin. Klin. Wochens.*, No. 10, 1885) describes a curious affection coming under his notice, in which five generations (and possibly even more) of one family were involved.

The first member of the family to come under his notice was a well-developed, hearty young man, 16 years of age, who had suffered from earliest childhood with this form of dermatitis. In winter he was free from all sign of disease, except possibly after running exercise. But in summer even a slight pressure, if continuous, sufficed to bring out a profuse eruption of blebs appearing in the most various localities. In school, sitting on the wooden bench brought them out upon the buttocks; in gathering berries, the loins became affected; the pressure of the garters caused a ring of blebs to form around the legs. Strokes and bumps, however, did not give rise to blebs. Digestive disturbances, pneumonia, and an attack of eczema did not seem to influence the eruption of blebs.

On examination, June 24, 1884, (the palms of) both hands were found covered with pea- to walnut-sized blebs. Still larger blebs were found on the sole and inner edge of the feet. A bleb on the ball of the left great toe poured out over six cubic centimetres of a limpid serum. Pressure on the larger blebs caused some pain. The bases of blebs emptied a few days previously were inflamed, red, and firm. On the legs, arms, and loins were marks of old blebs. The blebs were never followed by scars. The temperature was normal, the urine free from albumen.

The eruption present had lasted fourteen days; new lesions were coming out.

July 11. A few blebs between the fingers and on the feet. Elsewhere all dried up.

The skin was abnormally excitable, so that with a sharp hard stick letters could be written by the red lines which remained after pressure.

The other patients in this family gave the same history of an eruption in all respects similar, only that in some cases severe burning and itching accompanied the outbreak of the bullæ. The affection began in each instance in early childhood, and became somewhat less marked about puberty, but the tendency remained during the whole lifetime. Some cases remained well through the winter, and all were much worse in the summer. No treatment had been of any avail. The blebs came out with uncommon rapidity when the skin was covered with sweat or any other fluid, so that the patients did not dare to spit on their hands when at work; otherwise blebs would certainly appear upon the palms. Greasing the hands or rubbing them with dry earth appeared to be useful in some cases when work was to be done.

Puncture of the blebs led to inflammation and suppuration, as did scratching or striking the parts. There was at no time fever or loss of appetite, though sleep was at times hindered by itching. The patients were obliged to give up their occupation as farm-laborers, and were declared unfit for military duty. The unaffected members of the family were perfectly healthy, except that they all had a tendency to excessive sweating of the feet. The genealogy of the family, followed out through four generations by Dr. Valentin, showed eleven members affected by this peculiar eruption. Two of these were women.

In addition, Valentin has observed two of those curious cases described by Quinke as acute œdema, cases which had been under the care of Dinkelacker, pupil of Quinke, and had been published by him.*

* Inaug. Diss., Kiel, 1882.

Valentin's cases also resemble the neuroses of the skin recently described.*

IS HERPES ZOSTER CONTAGIOUS?

Dr. Mullen reports in the *New York Medical Record* (March 7, 1885) the case of a young lady who came home a distance of fifty miles on account of having herpes zoster. It occupied the space from the sternum to the centre of the back. Three weeks from the time she came home, her mother, an old lady, was attacked with the same disease, commencing on the side of the nose, passing over the side of the forehead, and terminating near the neck. Both cases were protracted and severe.

This is one of those absurd observations which sicken the heart of the scientific investigator of disease.

MEDICINAL ERUPTIONS.

Eruption due to Borated Cream of Tartar.—Under the name of "tartarus boraxatus," which is not found in English pharmacopœias, but which I take to be a borated cream of tartar, Alexander (*Vierteljahrsch. f. Derm. u. Syph.*, vol. xi. p. 110) designates a substance of which he gave about half a drachm every two hours during the day for some two weeks. At the end of that time the patient displayed an eruption extending over the entire body except the neck and face, and composed of discrete small papules accompanied by severe itching. This eruption spread for some days, taking on a deeper red tint and being supposed to be an acute universal eczema. Four days after the eruption first appeared, some of the fingers were so swollen that they could not be flexed, and shortly after the lesions on the forearms and calves became confluent in patches. This tendency to confluence increased until the eruption extended in sheets over the lower limbs, becoming hemorrhagic in places. The neck was involved by this time. At the end of a week after the appearance of the eruption the administration of the "tartarus boraxatus" was stopped, and the eruption began to disappear. The epidermis scaled off in fine scales over the body and in larger ones from the hands, while a yellow sticky fluid exuded from the eyelids. The skin of the feet came off nearly entire. At the end of a week later the patient was well.

Alexander gives the following points of difference to aid the diagnosis of the eruption described, and that of measles, which it most resembles:

ERUPTION OF MEASLES.	ERUPTION FROM BORATED CREAM OF TARTAR.
	In the early days of the eruption it resembled measles closely.
Usually occurs in children.	Occurred in a man of 48.
Contagious.	No source of contagion.
Prodromes.	No prodromal stage.
Involvement of respiratory mucous membrane.	Respiratory mucous membrane unaffected.
Fever.	No fever until towards the last.
Eruption occurs first upon face, and is most marked in that locality.	Eruption appeared first in body, neck last involved, face not at all, worst in legs.
Only slight hemorrhages, occasionally in worst cases.	Hemorrhagic in leg.
Subsequent desquamation slight.	Subsequent desquamation severe and extensive.
Little (or no?) itching.	Much itching.
Eyelids not usually affected.	Eyelids affected moist and weeping.
General condition much disturbed.	General condition slightly disturbed.
Temperature high.	Temperature only high towards end.
Runs a regular course.	Ran a very irregular course.

Eruption due to Mercury.—Alexander (*Vierteljahrschr. f. Derm. u. Syph.*, vol. xi. 1884, p. 103) gives the case of a girl of 21, who was suffering with some slight affection, probably eczema of the eyelids, for which she was ordered an ointment of hydrarg. precip. alb. 1 part to adeps 10 parts. This ointment in a bean-sized piece was rubbed into the lids. The skin began to burn at once, and in spite of washing off the ointment an eczema (?) was lighted up which spread until it covered the whole body. At its height the eruption is said to have resembled scarlatina.

TREATMENT OF SKIN-DISEASES.

Chrysarobin Pigment in Tinea Tonsurans.—Dr. W. T. Alexander, in an article on the treatment of an epidemic of ringworm in a public school (*Jour. Cut. and Ven. Dis.*, February, 1885), recommends a pigment of ten-per-cent. solution or suspension of chrysarobin in liquor guttaperchæ. The method of using it was as follows. The hair was closely cut or shaved on all the heads which presented scaly patches; the scalp was thoroughly cleansed, and epilation by forceps of the hairs on the spots, and for a short distance around them, was practised. This left a clear bald spot, the centre of which was thickened, infiltrated, and of a dark-gray color, contrasting sharply with the healthy skin around it. This discolored area was then covered with a layer of the pigment, applied with a stiff brush. Nothing further was done until the artificial cuticle

* Die Neuropathischen Dermatosen, von E. Schwemmer, Wien und Leipsic, 1883.

began to crack, or until the growing hairs pushed their way up through it. The application was then renewed, and this was done twice or thrice a week. No attempt to isolate the patients was made, and no other precautions were taken, except to make them wear caps, to insist on frequent inspections and thorough cleanliness, and to attend to their general health. Cod-liver oil or iron was administered to such as seemed to need them.

Alopecia.—Lailler recommends daily frictions with a flannel dipped in one of the following mixtures: alcohol (60 per cent.), ʒiii, ʒi; essence of turpentine, ʒv; ammonia, ℈iv; or, alcohol (90 per cent.), ʒiii, ʒi; quiniæ sulphat., gr. xv; ess. bergamot, ʒiiss; ess. wintergreen, ʒss. It is also necessary, from time to time, to shave the scalp, and give, if need be, internal treatment to the patient.

Onychia.—Dulles (*Med. News*, 1885, p. 321) recommends washing the usually stinking finger or toe-end with a weak solution of permanganate of potassium, trimming the nail back to where it is attached to the matrix, dusting on a fine powder of iodoform, and covering the whole in with turns of a narrow strip (not more than a quarter of an inch wide) of rubber adhesive plaster, which requires neither heat nor moisture to fix it. Pain, odor, and evidences of high inflammation rapidly disappear. The details are important: thorough cleansing and removal of dead nail, the iodoform in *fine powder*, and the plaster smoothly applied, beginning on the proximal side of the nearest interphalangeal joint *obliquely to the long axis of the finger or toe*, and carrying it up towards the end and round until it begins to return: by continuing these turns the strip, with a little guidance, will gradually make first a latticed covering, and then cover up the interstices of this lattice so as to make a complete cap. If necessary, a few strips may be applied directly over the end of the finger or toe to fill in gaps. The dressing may be removed in two or three days and renewed.

A new method of making Ammoniated Mercury Ointment.—Mielck (*Monatschrift f. Dermatologie*, 1885, p. 22) suggests that in order to obtain white precipitate in a finer state of division than it is customarily found, the precipitate obtained by the addition of aqua ammoniæ to a solution of the bichloride of mercury should not be allowed to become perfectly dry. He advises that the washed precipitate be dried so far that the stiff paste shall contain about fifty-five per cent. of the precipitate to forty-five per cent. of water. This is then mixed with the most concentrated glycerin, so that the latter shall contain one-third of its weight of dry precipitate. This thirty-three-per-cent. paste mingles very easily with ointments of various kinds, and forms a more agreeable as well as a more active ointment.

Treatment of Psoriasis.—Bésnier suggests painting a fifteen-per-cent. solution of chrysarobin in chloroform on the patches, afterwards coating it over with liquor gutta-perchæ. If there is much scaliness, a ten-per-cent. solution of pyrogallic acid in ether may be used instead, this also to be covered with a layer of gutta-percha.

Treatment of Eczema.—Dr. Max Burchardt remarks on the frequent coincidence of eczema of the face and scalp with inflammatory eye-troubles. A more or less considerable group of papules and vesicles can be seen on the outer surface of the eyelid and in its neighborhood. One or both sides may be attacked, and in the latter case one is usually worse than the other. When one side only is affected, a conjunctivitis or keratitis phlyctænoïdes is observed in the corresponding eye, while the other is unaffected. When eczema occurs on both sides, both eyes are affected to a degree accordant with the comparative severity of the corresponding eczema. When the latter occurs at a distance from the eye, the corresponding disturbance is less marked. Burchardt regards the eye-trouble in these cases as an extension of the eczema, the more so as the latter can often be traced to the edge of the lid. He thinks also that, if the eczema be not taken in hand, severer eye-troubles and even blindness may follow.

Burchardt's treatment of this form of eczema is as follows. Having cleaned off all crusts and scales, and having cut the hair short where this exists, he hastily paints over the eczematous patches with a three-per-cent. nitrate of silver solution. If one pencilling is not sufficient, the remaining crusts and scales are removed, and another coat laid on, and so on, several times within a few minutes. The eczematous patches are mapped out by the stain left after pencilling.

This procedure is at the outset undertaken daily, later every second day. The operation is at first painful, so that children cry, and the suffusion of the face thus brought on causes capillary oozing from the diseased patches. This, however, soon ceases, and each day the patches grow smaller without the employment of internal treatment. The cure is hastened if after each pencilling the following ointment is thickly spread over the affected parts:

℞ Ol. cadini, gr. xl;
Pulv. zinci oxidi, ʒi;
Vaselini, ʒv. M.

This salve is particularly useful when the eczema occurs about the temporal region; but it should not be applied upon the eyelids, as it is apt to get into the eyes and prove irritating. Burchardt says that ung. precip. album may be used on the eyelids; but this will probably do more harm than good.

TRANSLATIONS.

Pathogenesis of Rachitis.—Dr. M. Kassowitz is publishing a valuable systematic paper on "Normal Ossification, and the Diseases of the Bony System in Rachitis and Hereditary Syphilis," of which the second division of the second part, on the "Pathogenesis of Rachitis," appears in the last issue of the *Medizinische Jahrbucher* (1884, Heft IV.). The results of clinical observation and experiment upon animals are quoted in support of the view of the local origin of the disease. With regard to the view that the deficient resorption of the lime salts is due simply to the fact that it is hindered by diseases of the digestive apparatus, dyspepsia, and catarrh of the stomach or intestinal tract, he calls attention to the following facts:

1. That rachitis extremely frequently is developed *intra uterum*, where neither digestive disorders nor insufficient resorption of the lime salts brought to the fœtus in the maternal fluids, can be assigned.

2. That rachitis, as is shown by experience and the testimony of numerous observers, very commonly shows itself in children possessed of normal digestion and who enjoy a good bodily condition of nutrition.

3. That in the summer months, just when disorders of the digestive apparatus prevail in children, the number and intensity of cases of rachitis diminish gradually and in a most striking manner.

4. That, finally, other conditions, which are in no wise connected with the digestion and resorption of lime salts, such as bad hygiene of dwellings, syphilis, etc., favor the development of rachitis in a most remarkable degree.

After considering other theories of pathogenesis, the article concludes with the following propositions:

1. That the deficiency of lime of rachitic bones is called forth, singly and alone, by the local inflammatory process.

2. But the local process in the bones in turn has its origin in some preceding anomalous conditions of the entire organism.

Death caused by a Purgative in a Case of Intestinal Occlusion.—An interesting case of death following the administration of a dose of castor oil has been reported by M. Nicaise to the Clinical Society of Paris. The patient, a man 45 years of age, had a narrowing of the small intestine following a strangulated inguinal hernia, which was operated on in 1875. There were recent digestive troubles, vomiting, and intestinal colic, but the stools were regular and appetite good. Following a dose of one ounce of oil were symptoms of obstruction of the bowel, with rapid collapse and signs of failure of vital powers. Acting upon the idea of the existence of a stricture of the small intestine following the hernia, laparotomy was performed, but no constricting band was found. Enterotomy was then performed, and the contents of the distended intestine allowed to escape. The patient died four days later. There was no peritonitis and no effusion. A pouch-like dilatation of the small intestine was found just above the constricted portion, the communication between the two portions being not at the bottom, but to one side, in such a way that the increased muscular contractions, and excessive secretion under the influence of the purgative, had compressed the opening into the constricted portion and produced complete occlusion.

This case demonstrates the danger of purgatives in intestinal obstruction, and the necessity of prompt resort to operative measures for relief. The utility of washing out the stomach in such a case appears very evident.—*La France Méd.*, No. 44.

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MEDICAL TIMES.

PHILADELPHIA, JUNE 13, 1885.

EDITORIAL.

ÆSTHETICS IN A NEW RELATION.

FOR nearly a half-century *an*æsthetics have been a perennial topic of discussion in medical journals. It is, therefore, with something of a sense of relief that we observe a disposition to discuss the positive aspect of the question, especially since the daily papers have devoted so much valuable consideration to æsthetics, under the leadership of Oscar Wilde and "Patience." The idea may be thought absurd that pills and bacilli have anything in common with paintings and basilica, but is not medicine an Art as well as a Science? Moreover, did not Apollo, the father of (patent) medicine, cure diseases and charm even the rocks with his lyre? Although Apollo is no more, his Art survives and the tuneful lyre remains.

We are led to these reflections by a learned and elegant editorial upon that important topic, "The Nursing-Bottle and the Æsthetic Faculty," in the pages of an esteemed contemporary, in which Plato and Erasmus Darwin are quoted to prove—1, that the fountain of the æsthetic faculty is woman's mammary gland (*i.e.*, from *αἰσθάνομαι*); 2, that the use of the nursing-bottle is the cause of the decline in the appreciation of beauty; and, 3, that infants brought up by hand must be destitute of the æsthetic faculty: the conclusion being that "those who love the beautiful, and mourn its decline, must seek the remedy for the latter by encouraging maternal lactation and banishing the nursing-bottle, when there will be hope that the coming race will attain the poetic ideal in this regard."

We fear that any existing deficiency of æsthetic culture is not attributable directly to the presence of the nursing-bottle, nor can it be implanted by so easy an expedient as "suckling fools." Before societies are formed, as has been ironically suggested, for the culture of the mammary gland, we dare cherish the hope that less restricted views of æsthetics may find acceptance. Plato never separated the beautiful from the good. Baumgarten, who originated the term æsthetic, defined beauty as the result of the highest and purest æsthetic perception, to the realization of which the finer portion of our nature aspires, and to trace which through the whole sphere of art is the work of æsthetic philosophy. Victor Cousin, a modern exponent of Plato's views, has also an exalted idea of the fountain of the æsthetic faculty. In his treatise *Du Vrai, du Beau et du Bien* he endeavors to rise to the conception of the source of beauty, which he finds in God, "in whom is combined absolute unity with infinite variety."

Deprecating anything tending to uphold gross sensualism in philosophy, art, or medicine, we agree, with Plato, that in *τὸ καλόν* we must always recognize the good as well as the beautiful.

TRANSACTIONS OF SOCIETIES.

THE objects sought to be obtained by the institution of medical societies are the organization of the profession and the advancement of science. In most of the States of this country local societies are purely voluntary organizations, without political affiliations or duties; in some they have been publicly recognized by the community as representing the profession, and have had conferred upon them special responsibilities in connection with State Boards of Health and the regulation of medical practice. The national societies of distinctly medical character, however, are purely voluntary associations: although to a certain extent representative, they are representative of ideas rather than of men.

The scientific value of medical societies consists partly in stimulating and encouraging individual research, but principally, we believe, in lifting the mass of the profession out of routine and informing its members of the steady progress of medical art. If medical societies fulfil their mission, it is evident that their proceedings should very closely reflect advanced thought in the various departments of medicine, and therefore reports of their meetings should afford the most valuable synopsis attainable of current opinion upon questions engaging the mind of the profession. As medical journals seek to occupy the same field, it is evident that transactions of truly representative societies will always eagerly be sought for and given a prominent place in their pages. Unfortunately for the journals, the impulse to hold annual meetings appears to be almost universal at this time of the year, and editors just at present find themselves struggling under an embarrassment of riches. Should our readers feel surfeited by so many reports appearing simultaneously, they have at least the consolation of knowing that the meetings will not occur again for a whole year.

AN INVITATION TO THE CHOLERA.

ALTHOUGH the appropriation for the connecting-sewer has been vetoed, and the good people of Philadelphia—at least that portion of them drinking Schuylkill water—are condemned to depend upon a contaminated water-supply, we hold that this is no reason for abandoning ordinary precautions against pollution within our city limits. Attention has been repeatedly called to the steamboats and boat-houses, with their water-closets discharging almost into the fore-bay, and we hope that the authorities will take efficient steps to remove this menace to the health of our city by compelling the use of earth-closets and other means.

We desire especially to call the attention of our health-officers to the danger threatening from the proposed national encampment of soldiers in Fairmount Park in the middle of summer. If the drainage of the Centennial grounds was sufficient cause for alarm, surely the presence of from ten to thirty thousand people daily within a limited portion of the Park, the drainage of which goes into the fore-bay, should cause some concern. Must the lesson of the Plymouth epidemic go unheeded? If cholera should appear this summer, will it not find the conditions most favorable for its development in a community whose drinking-water is seriously contaminated with sewage?

THE STATE BOARD OF HEALTH.

THE Committee of the State Medical Society and the profession at large are to be congratulated upon the passage of the bill to establish a State Board of Health for the better protection of life and health and to prevent the spread of contagious and infectious diseases in this commonwealth. We have already published (page 557) the text of the bill, and hope for the best results from its operation. If the Board shall accomplish what is reasonably expected from it, the Plymouth epidemic will not have raged in vain. Sanitary science apparently cannot advance in communities ignorant of its importance, except with the aid of object-lessons on a grand scale, which may be properly used to "point a moral," even if they do not "adorn a tale."

Pennsylvania having now distinctly ranged among the progressive States, the next step will be to establish a Medical Examining and Licensing Board, which will be brought before the next Legislature by a Committee of the State Medical Society. County societies which have not yet taken action upon the subject should communicate with the Committee.

LEADING ARTICLES.

NERVOUS SYMPTOMS OF ENTERIC FEVER.

II.—PATHOLOGY.

THE chief factor in the production of the nervous troubles is without question the alterations of the blood. Next comes pyrexia, then active or passive cerebral anæmia or hyperæmia, and finally inanition.

1. *Changes in the Blood.*—The blood invariably undergoes alterations of the most serious nature: primarily, in consequence of contamination by the infecting principle; secondarily, in consequence of contamination by means of the products of denutrition. It becomes deficient in globules and in oxygen.

Bouillaud, who bled his patients, observed that in the earliest period of the sickness the blood had lost its consistence. It presented some trace of the buffy coat, but never the firmness of the inflammatory diseases. In the later stages the clot was invariably less in amount than ordinary, and its softness, which varied greatly in degree, was often such that it amounted to a mere dark diffluent pulp, as if the plastic and coagulated part were broken down and in some way retained in the serum. This condition of the blood was regarded as among the most constant phenomena of typhoid fever, and was invoked to explain the congestions so frequent in this disease.

Becquerel and Rodier observed that the red globules were less abundant in advanced stages of the disease. Malassez found upon defervescence the number of the red globules to undergo a prodigious increase. They are then soft, readily undergo change in form, and tend to become crenated as in the infectious diseases.

Virchow was among the first to point out the fact that the white corpuscles are increased. The researches of Bonne and Grouardel proved that the number of white corpuscles rapidly increased during the early days of the attack until the eighth or ninth, when they again diminished, the proportion becoming normal and undergoing from that time oscillations corresponding to certain complications, but without definite relation to the rise in temperature until convalescence, when they again increased.

In rare instances Cornil observed in the blood in enteric fever patients large polygonal cells, enclosing red corpuscles more or less changed and resembling the large cells of marrow and of the spleen.

Since 1865, Tigri, and after him Hallier, Coze, and Felz, have found in the blood free granules in abundance, which they have regarded as bacteria. Other corpuscular bodies of various forms, micrococci, some of them indeed difficult to distinguish with certainty from other granules not organic in nature, finally, bacilli, have also been observed; but, as yet, neither the specific character of these organisms nor their pathogenic *rôle* has been determined.

The chemical analysis of the blood has, however, yielded more satisfactory insight into the pathological physiology of this fever. The disassimilation first affects the albuminoid principles of the blood. According to Becquerel and Rodier, the albumen is invariably diminished. Denis estimated this diminution at a fifth. The fibrin is also diminished, its loss being proportionate to the gravity of the attack.

Although the loss in corpuscular elements increases with the progress of the case, their absolute destruction is less than in many other acute maladies. Quinquand, who has studied the variations of hæmoglobin, also found that in enteric fever the diminution of this principle is less than in many other febrile affections, but that the power of the blood to absorb oxygen is markedly reduced; one thousand grammes absorbing only one hundred and ninety-five cubic centimetres as against two hundred and forty in health. There is a corresponding diminution in the exhalation of carbon dioxide, the expired air containing about one-fifth less than in the physiological state.

The blood further contains many waste products, the results of imperfect organic combustion. Substances incompletely oxidized accumulate. These undergo elimination by the urine, in which they sometimes amount to as much as ten grammes per thousand. In certain cases, a decided diminution in the solids of the urine has been observed coincidently with the development of grave cerebral accidents.

2. *The Pyrexia.*—Physicians have observed from the earliest time the close correspondence between the rise in temperature and nervous accidents. The evolution of these two groups of symptoms is in most cases parallel and simultaneous.

Stupor, for example, and other signs of a functional perversion of the nervous centres, increase or diminish as the fever becomes intense or moderates. The theory, seductive by reason of its simplicity, and defended by many physicians, that the nervous accidents are almost wholly dependent upon the febrile movement, has its origin in this parallelism. In the antipyretic treatment in all its forms the reduction of temperature is followed by a temporary amelioration of the nervous symptoms. Sometimes they disappear as by enchantment. Riberolles insists upon it that the influence of the cold bath upon the temperature is not greater than its direct influence upon the nervous centres. The bath lowers the temperature, it is true, but even without the lowering of the temperature it ameliorates the nervous symptoms. Ferreol treated a patient suffering from violent delirium, with a temperature of 38° C., with cold baths. The delirium ceased, but at the same time the thermometer rose to 39.5° and 40° C. If the cold bath (which sometimes fails to reduce the temperature) almost always exerts a favorable influence upon the nervous system, we must regard it as being no less a direct sedative or stimulant to the nervous system than a depresser of temperature.

Riberolles regards cold affusion as useful not so much in reducing temperature as in stimulating the nervous system, and calls attention to the nervous phenomena observed in the period of invasion of enteric fever,—namely, prostration of power, headache, vertigo, etc., which precede the febrile movement,—as evidences that the more marked nervous phenomena of the later stages may be also due to other causes than the elevation of temperature. In fact, the same condition controls both. The infecting principle which provokes the febrile action modifies at the same time the activity of the central nervous system. The two effects are correlative and simultaneous, and these two groups of symptoms resulting from a common pathogenic process augment and diminish together.

3. *Hyperæmia and Anæmia.*—Visceral congestions are the rule in enteric fever, and the nervous system is by no means an exception to this rule. While marked congestion of the gray substance is rare, it is certain that many of the advanced lesions occasionally found in the brain have their origin in hyperæmia, and that the serous effusion sometimes met with in the ventricles is the result of venous stasis. Notwithstanding these facts, Riberolles is of the opinion that this congestion is by no means in all cases sufficiently intense or extended to account for the grave functional disturbances observed. It is rather the quality of the blood supplied to the nervous system than its quantity which is at fault. Nevertheless, symptoms occasionally occur which point to transient hyperæmia of the meninges, if not indeed to actual inflammation. Such symptoms are strabismus, oculo-pupillary phenomena, convulsions, trismus, contractures, etc. When they occur in the beginning of the attack, it is probable they are due to a transient hyperæmia of which traces only are ever found post mortem. Serious nervous symptoms are, however, much more apt to occur at the height of the fever. Liebermeister found cerebral œdema in a case in which there had been trismus, and in two others attended by convulsions. In many instances it is impossible when nervous symptoms of this kind first appear to determine whether they are due to functional disturbances of a high grade or to inflammatory lesions. Such symptoms often have their origin in some lesion of the neighboring parts, such as intense otitis, caries of the petrous portion, necrosis; sometimes they are pyæmic.

Liebermeister has described under the name *cerebral excitement with decline of temperature*, certain nervous disorders developing at the height of the fever and in the middle of the second week. The patient is seized suddenly with symptoms of meningitis, grave intellectual disturbance, and insensibility to light. The temperature falls to 37° C. or 38° C., and remains about this level during the continuance of the nervous phenomena. In non-fatal cases, the nervous symptoms disappear after a time, and the temperature rises to the level corresponding to the period of the sickness. This observer regards the cause of these disorders as an irritation of the heat-centre.

To sum up, the nervous complications arising at the beginning of the attack must be ascribed to fluxions not associated with definite local lesions. Those which arise later in the course of the disease must be ascribed either to irritation of the encephalon or its meninges, or to true inflammatory processes.

Merklein in 1882 published the following case. A young man, 21 years of age, was seized in the course of the fever with intense agitation, and shortly expired comatose. At the necropsy there was found copious subarachnoid effusion with distention of the ventricles. The arteries were sound. In this case it would appear that the hemorrhage was due to intense congestion. Weiss found at the post-mortem examination of an individual dead of enteric fever an abscess of the brain, which had developed in the course of the fever, and had produced an incomplete hemiplegia and Jacksonian epilepsy.

The cord may likewise be the seat of hyperæmia, which then occasions special symptoms. In some cases the beginning of the sickness is marked by unusual pain along the spine, especially in the lumbar region, and extending into the inferior extremities. This symptom, fully described by Fritz in 1864, seems to be due to hyperæmia or irritation of the meninges of the cord, and may be compared to the pains which mark the onset of variola. Opisthotonus, if transient, probably has its origin in congestion of the cord. Persistent symptoms, referrible to the cord, occurring late in the course of the disease, are due to various lesions, such as foci of white softening, cervical meningo-myelitis, *sclérose en plaques*, etc. Contractures and convulsions, when not due to uræmia, must be ascribed to central lesions. In certain cases terminating in recovery or where the autopsy yields negative results, the course of disturbances of motion and of sensation yields indications so indefinite that their cause must remain at best a matter of conjecture.

Anæmia of the nervous centres is an important factor in the production of cerebral disorders. This is especially the case in those who were previously anæmic, or who during the course of the attack have suffered from abundant or repeated hemorrhages.

Inanition is the cause of the functional disorders of the nervous system which occur during the defervescence and in a period of convalescence, and which are often intense. This group of nervous disorders is by no means peculiar to this disease, and is to be distinguished from lingering disorders due to permanent lesions.

The following conclusions are warranted by the above review of the subject:

1. The so-called typhoid condition (stupor, somnolence, hebetude, prostration) is dependent upon the alteration of the blood caused by the infecting principle. It may be said that the intensity of these symptoms is proportionate to the virulence of the infection.

2. Delirium (especially when violent) and agitation, in a word the ataxic phenomena, are produced by the same pathogenic principle. But their manner of development and their course are to a great degree influenced by the pyrexia. The fact, however, must not be overlooked that certain forms of delirium occurring in enteric fever are not dependent upon the elevation of the temperature.

3. Certain forms of delirium, especially delirium ceasing after free epistaxis, and certain muscular disorders, such as convulsions and contractures, must be ascribed to hyperæmia. Disturbances of sensation are likewise in many instances the result of congestion of the nervous centres.

4. Vertigo, delirium, etc., may also be due to anæmia, which plays an important part in the production of enfeeblement of the central nervous system. Collapse is very often due to abundant hemorrhages. Inanition, producing, as it does, a profound denutrition, is a cause of anæmia and favors the collapse and marasmus which are so often fatal.

In conclusion, whilst intense pyrexia is the cause of serious symptoms and grave complications, it is possible to assign to it too high a position as a pathogenic factor. The dictum of Griesinger, "The fever in great part controls the situation"—*Das Fieber beherrscht zu grossem Theil die Situation*—has exposed those who have accepted it to grave therapeutic errors. The nervous phenomena of enteric fever are produced by various causes which act sometimes together, sometimes separately. It is not easy to discover the predominant element in a pathogeny always complex, nor is it desirable to carry the analysis to an extreme. From a clinical stand-point, however, the subject is important, for the management of the nervous symptoms will be successful in proportion as their interpretation is exact. J. C. Wilson.

Cocaine for Sore Nipples.—The latest application of cocaine is for tender and excoriated nipples. A five-per-cent. solution brushed over the nipple makes nursing possible and painless.—Dr. Andhoni, *Thérapeutique Contemporaine.*

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

A VISIT to the Observatory of Montsouris. —Dr. Landouzy, who is a professor (*agrégé*) of the Paris faculty, and one of the most eloquent teachers of the school, has been appointed to deliver the course of lectures on hygiene in place of Prof. Bouchardat, who is now on the retired list. He opened his course in a novel and very effective way by presenting to his class immense graphic curves of the rise and fall of typhoid fever and cholera in Paris for different years. He followed this objective style of teaching by showing large maps of Paris, tinted in black in the quarters of the city that were always affected by these zymotic diseases, owing, as he proved, to the defective sanitary state of those sections. He then continued this demonstrative mode of teaching by inviting the class to accompany him on visits to various hygienic points of instruction about the city, where he said that he would explain what could be done in a sanitary way to prevent disease. Among these visits will be one to the large sewers, and to the abattoirs, to show the means used to prevent the sale of bad meat by pouring petroleum over it. Another visit will be to the various crêches,—places that are organized with a corps of wet-nurses who are charged with the care of working-women's babies while they go out for the day. This series of shops are in the poor quarters, where there formerly was such frightful mortality among the babies owing to the poor women being compelled to leave their children in the care of almost any one who kindly undertook to help kill them with a bottle of sour cow's milk. In these places a small sum per day is paid by the mother, and the child is cared for by one of the appointed nurses, under the direction of a lady superintendent, and delivered over to the mother when she comes for it at night.

The first visit was to *L'Observatoire de Montsouris*. This municipal observatory and laboratory is in a large building crowning one of the highest hills on which Paris is built. Its object is not merely meteorological, but it contains rooms for the study of organic substances in the air and water, the investigation of which was the principal object of the visit. We were met by Dr. Miquel, the chief of the micrographic service, and author of "Les Organismes vivants de l'Atmosphère." This study of the living organisms found in the air, and of the means used to collect and count them, with the applications of such study to hygiene, is of great importance. We will not dwell on the various instruments, hygrometrical observations, and chemical apparatus, but will come at once to the very remarkable operations of Dr. Miquel, which he very kindly explained in full, showing us his inventions for catching and counting the living aërial microbes. With his process it is as easy to determine the number of germs in the air as it is to perform any simple chemical experiment. The Germans at Berlin also now do this work, but it has been going on here quietly in the doctor's laboratory since 1875, and his work has contributed in very large part to solving the obscure problem of the nature of the various microscopic impurities of the atmosphere.

The system consists in sowing the dust contained in a certain quantity of air in a prepared liquid called a "bouillon sterilisée," which is a nutritive jelly prepared from meat (at 110° C.). Another of these jellies is prepared by boiling the *Fucus crispus* in beef-soup.

It is all the more easy to catch and culture the air-germs, as Dr. Miquel has invented an aëroscope that will register them. It consists of a cylinder, moved by a small American clock-work, on which is fixed a band of nutri tive paper. This is covered over with a glass globe, which has a slit in it to allow the germs to be drawn in, and it has a tube at the top to draw the air through at a certain rate. They may also be taken even more simply by passing air at a measured rate through small glass globes, which contain the nutritive fluid, and examination of it after a certain time by the microscope. It would take up too much space to describe in detail the mode of operation. Let us pass on to the practical results,—first, as regards the bacteria found in the air of Paris.

There has been noticed in these organisms an annual rise and fall, as well as a daily one. The annual mean is 445 bacteria per cubic metre. In winter it was 260; spring, 495; summer, 650; autumn, 380. These observations were taken at the Observatory at Montsouris, a very healthy spot, but the number found at another of the stations—in the Rue de Rivoli, which is in the centre of the old part of Paris—was very different. Here the mean annual was 6295 in 1881, and it declined to 3480 in 1884, owing to the strenuous efforts made by the city government in cleaning the streets and flushing the gutters daily. Zymotic diseases declined during the same period from 14,080 to 11,500, but phthisis has not followed the descending scale: it continues to destroy per year in Paris over ten thousand people. But to return to the bacteria in the air.

Other experiments were made at Berne, Switzerland, which showed that the air of this city was four times as pure as that of Paris, but not so pure as that of the Observatory. The annual mean was 580 bacteria per cubic metre of air. Other trials were made in different quarters of Paris. Rue Monge, for instance, gave as high as 36,000. Prof. Ver-

neuil's wards at Hôpital de la Pitié gave 73,540. To test the purity of mountain-air, a series of experiments were made on the Swiss mountains last year by M. de Freudenreich, of Berne. Then during various trips made by a sea-captain, who takes great interest in these experiments, quite a large number of observations were made, both in port and from ten to five hundred miles out at sea. Commandant Moreau found a great difference, which we will give in a table. He also noticed that certain winds are found to bring a larger number of the bacteria to Paris. The purest air was found to come from the west and south, and epidemics were noticed to arise after a continued series of north winds. The daily rise and fall is interesting to note. The highest number is found at 6 A.M. and 6 P.M.; from noon to 2 P.M., the lowest; the night minimum is at midnight to 1 A.M. In brief, the following table will give the results:

Atmosphere.	Bacteria per Métre Cube.
Atlantic Ocean, on deck	0.6
Port of Marseilles	600
Saloon of ship at sea	60
Summit of Pantheon Church	200
Park of Montsouris, Paris	480
City of Berne, Switzerland	580
Rue de Rivoli, Paris (mean of 4 years)	3,480
New house in Paris	4,500
Old house in Paris	36,000
Hotel-Dieu Hospital	40,000
Hôpital de la Pitié	70,000

It will not be necessary to write much to prove what deductions can be drawn from a study like this for the benefit of all mankind. The proved purity of mountain-air and sea-air has led to sanitary results that seem, at first sight, an impossibility; but it is an actual fact that a company has been formed to erect steam-engines, with pumping apparatus, in the heart of virgin forests (pine) on the mountain, and also on sea-coasts, so that before long pure air can be laid on to houses in Paris, and we will only have to "turn it on" to have a current of pure air in our rooms, unhealthy factories, and hospitals. Space fails us to tell of none the less interesting experiments made at the Observatory on the germs in water, etc.

In conclusion, we may say that these trials are made by government and by regularly-appointed scientific gentlemen, and that the designs of instruments in use and processes are free to all.

New Points on Cocaine.—Prof. Panas has just given to the Académie his latest experiments with this drug. When he last spoke of it he had said that it had a slight mydriatic action. He now finds that it determines a very large and persistent dilatation of the pupil. He at first thought that it might be that there was a mixture of atropine, but found out that, owing to the high price of cocaine, the persons who prepared it were in the habit of using the leaves twice,—that is, after having taken pure cocaine out of the leaves they pressed them over again, and got a substance that was a mixture of cocaine and some other substance which was not well known, and it is very likely that this unknown derivative of hygrine is the cause of the dilatation of the pupil. This new mydriatic produced a dilatation as large as atropine, but less permanent. In the case of atropine, as is well known, it often persists several days, while with this substance it *lasts only twenty-four hours*. It is not anæsthetic, like cocaine.

Dr. Ollivier brings forward two facts tending to prove that tuberculosis can be transmitted by the respiratory tracts, at least in children. The first case was of a boy, 28 months old, who was allowed to sleep with a child who died of phthisis: he got it shortly afterwards. The second case was of a child 4 years of age that had infantile paralysis, but was otherwise healthy. It was put to sleep in the hospital next to a bed in which several children had died of phthisis, and before long it was attacked with the disease. At the present moment a vote is being taken up in France on the transmissibility of tuberculosis, and all doctors are requested to send their observations to Dr. Vallin, 8 Rue de l'Abbaye, Paris.

Dental Alterations in Morphia-Maniacs.—M. Combes calls attention to the teeth of those unfortunates who abuse the use of morphine. When they become saturated with the drug, it attacks, first, the molars on their grinding surfaces, where it makes a deep cavity. It goes next to the bicuspids, then to the canines, and in these last it excavates quite a deep cavity. This decay does not seem to be painful, and it is not accompanied with periostitis, but it proceeds with great rapidity. M. Combes has noticed the entire set of teeth affected in a year after he saw the first one decayed. This destruction of the teeth coincides with the loss of the hair. The advice given is to suppress the dose of morphine little by little, and use hydrotherapia. For the local state a wash is recommended of a solution of iodide of potassium.

The following solution for the subcutaneous injection of iron in anæmia is recommended by Dr. Martinetti, in whose hands this treatment has met with success. The dose is one cubic centimetre each injection:

℞ Ferri citratis recentis, 2 grammes;
Aquæ laurocerasi, 20 grammes. M.

Dr. Auvard finds the following to be the best antiseptic for use in those annoying cracks in the mammary gland that so often finish by suppuration:

℞ Aquæ destillatæ, 200 grammes;
Acid. boric., 6 grammes. M.

Apply on a compress, and cover over with a wad of cotton. It will take away all pain and inflammation, and does not possess the danger of corrosive sublimate.

Dr. Mauriac gives the following solution for dressing cutaneous eruptions, such as syphilides and mucous patches:

℞ Chloral hydrat., 5 grammes;
Tincturæ eucalyptus, 10 grammes;
Aquæ destillatæ, 500 grammes. M.
S.—Ft. solutio.

It ought to be of interest in catarrh-stricken America to give the favorite prescription of the Paris doctors in most cases of nasal and pharyngeal catarrh. It is used and highly recommended by so great an authority as Prof. Peter, almost daily. It is a powder invented years ago by a then celebrated chemist, to act as an artificial "Eaux Bonnes" water. (This sulphur-water has long been given in this country in all affections of the respiratory tract.) It is called Pouillet's powder, and is used with a spray-apparatus. The writer can recommend it strongly, having seen several cases of post-nasal catarrh greatly modified by its use in a very short time. The following is the composition of the powder:

Sulphate of soda, bicarbonate of soda, sulphate of potash, gum arabic, acid tartaric, of each equal parts. Dry and mix. Dose, ten grains to a quart of warm water. Spray through the nose or throat, as desired, twice a day.

Experiments after Decapitation.—M. Laborde, who has charge of the physiological laboratory of Prof. Béclard at the College of Medicine, was permitted to make some experiments on the body of Gamahut, a murderer who was executed in Paris last week. He was not able to get the body and head for nearly twenty minutes after the decapitation, owing to some religious rites that had to be performed, but as soon as they got the head in the vehicle, which had been prepared with electrical appliances, he commenced his experiments. He at once raised the eyelids and found that the pupil was dilated, and on approaching a candle-light to the eyes the pupil contracted, so that it is an ascertained fact that the pupillary muscle retained its contractility for nearly twenty-eight minutes after decapitation, as reflex action was produced. Dr. Laborde then as quickly as possible opened the skull and put two fine needles in about the level of the region of Rolando. They passed through the cortical substance and went into the white substance. A current was then passed and a raising of the eyelid on the opposite side noticed, and a strong contraction of the inferior maxillary, strong enough to cause a bite. This took, in all, two or three minutes, and then all was quiet, when the strongest current had no effect even when the needle was placed in the medulla oblongata. At the laboratory in the Rue Rollin, Prof. Béclard and assistants were waiting, and experiments were instantly commenced by galvanizing the facial nerve, which caused a contraction of the facial muscles. In accordance with Prof. Béclard's ideas, the room was kept up to a temperature of 35° C. (about the heat of the human body). The result of various experiments is that there is a strong probability of the persistence of excitability of the brain, even after twenty to twenty-five minutes after decapitation.

Notwithstanding the severe laws to prevent the practice of the medical art in France, the dentists have no regulation, and any one who likes can set up as dentist. There are practically no restrictions to their giving nitrous oxide, and, indeed, chloroform. This is partly owing to there being no official school of dentistry in France. Since American dentists have come so much abroad they have helped to start no less than two independent schools of dentistry in Paris, that are well attended, but have no legal existence. Prof. Brouardel, who is president of the Commission of Hygiene, tells us that there is a prospect of a bill being passed to regulate the practice of dentistry in France. There are a number of projects,—one to recognize one of the two excellent schools, to which are attached as professors several American dentists, and another to allow the practice of dentistry to remain free, but a third one is the most likely to go on record shortly as a law. It is to the effect that all dentists must at least take the lower medical degree (*officier de santé*) or become doctors of medicine, so that future dentists will be as good as doctors.

T. Linn, M.D.

BALTIMORE.

MEDICO-CHIRURGICAL FACULTY OF MARYLAND.

THE Medical and Chirurgical Faculty of Maryland is one of the oldest State medical societies in the country. It has just held its eighty-seventh annual session. Notwithstanding its great age, it is still vigorous, and accomplishes each year its share of solid, honest work. During the meeting just closed it has maintained its ancient good fame, and made valuable additions to our knowledge.

The address of the President, Dr. Thomas S. Latimer, reviewed the "Origin and Diffusion of Cholera." After tracing the history of the disease in its home and through its various migrations over the world, he devoted some time to a consideration of the etiology and prevention of cholera in its epidemic manifestations. Dr. Latimer does not regard the specific character of Koch's comma-bacil-

lus as positively established. While it cannot be reasonably doubted that the condition of the drinking-water sustains some close causal relation to the development of cholera, yet this is not the only means by which the cholera-germ (whatever it may be) gains entrance to the body.

The relation of soil-moisture to the spread of the disease was referred to, and illustrations cited to show the influence of varying stages of the ground-water level upon the progress of epidemics.

After expressing the opinion that this country would be invaded during the present or following year, Dr. Latimer proceeded to indicate the measures which should be adopted to prevent the spread of the disease if it should be imported. Quarantine could not be relied upon to keep the disease out. The efforts of the public authorities alone should not be depended upon, but the cheerful, hearty, and intelligent co-operation of all classes of citizens can put the city in such a sanitary state as will present the most unfavorable conditions for the development and spread of the disease.

The library of the Faculty, which has been carefully fostered during the past few years under the direction of an efficient library committee, now numbers four thousand one hundred and seventy volumes. Sixty-four American and foreign journals are regularly received.

An excellent feature of the meetings of the Faculty is the annual oration, which is always delivered by some prominent member of the profession. The orator of the present meeting was Dr. H. Newell Martin, Professor of Biology in the Johns Hopkins University. Dr. Martin chose for his subject "The Physiological Action of Drugs," a topic which he invested with much interest and instruction. Dr. Martin possesses in an eminent degree that quality which his distinguished fellow-countryman, Mr. Matthew Arnold, characterizes as "lucidity." He is a model teacher, and no less distinguished as an original investigator. He reviewed the history of experimental pharmacology, considering at some length the experiments of Magendie which fixed the physiological action of strychnia, the discovery of chloral and amyl nitrite, and the determination of their therapeutic uses by previous experiments on animals. The concluding part of the address was devoted to a defence of vivisection in physiological and pharmacological researches. Dr. Martin spoke feelingly upon this subject, as he has recently been severely and unjustly criticised, both at home and abroad, for his advocacy and practise of vivisection in the institution with which he is connected.

Dr. R. W. Johnson read the report of the Section on Surgery. The report reviewed some of the more marked advances in surgery during the year. The opinion was expressed that the use of chloroform as an anæsthetic should be restricted, in surgery, to those cases where ether is not available.

In a portion of the report from the Section on Obstetrics and Gynæcology, Dr. John Morris created some amusement by his reactionary views upon some of the prominent procedures and operations of modern gynæcology. Trachelorrhaphy, the Alexander-Adams operation of shortening the round ligaments, and extirpation of the cancerous uterus were alike considered unnecessary and unjustifiable. Pessaries were also condemned as irrational devices, not only useless but injurious.

Dr. L. E. Neale, in another portion of the report from this Section, spoke of the value of Braxton Hicks's operation of combined version in placenta prævia. He also exhibited an axis-traction forceps of his own devising. Schultze's method of resuscitating the new-born child in cases of asphyxia was also shown by Dr. Neale. This method is as follows. The child is held by the shoulders, the thumbs resting upon the thorax, the child's head towards the operator and its anterior surface to the front. It is then swung upward so that its feet perform a partial revolution and lie between the head and the operator's body, the trunk being then in a state of forced flexion. The original position is then resumed by a reverse movement, and the repetition of these movements constitutes the method.

Two cases in which fibroid tumors were expelled from the uterus post partum were also related.

From the Section on Practice of Medicine Dr. John S. Lynch reported some observations on antipyrine. Dr. Lynch regarded this drug as the most effective antipyretic agent which we possess. It should be given in doses of fifteen to thirty grains, repeated every three to four hours until the temperature is reduced. In rheumatism the speaker had obtained effects equal to those of the salicylates. Its only disadvantage is the erythematous or urticarial eruption which sometimes accompanies its administration.

Dr. R. H. Thomas, from the same section, also related some favorable experience with kairin in similar cases.

Among other Section reports was one from the Section on Sanitary Science, on the "Non-Necessity of any Radical Changes in the Present Method of Disposal of the Dead," by Dr. George H. Rohé. According to the reporter, cremation is not a necessary measure, considered from a sanitary point of view. There are no trustworthy observations on record proving that cemeteries have a deleterious influence on the health of those living in the vicinity. Infectious diseases do not spread from the buried corpses of those who have died of such diseases. Not only are there no positive observations recorded in

favor of the view that cemeteries are foci of infection, but there is very strong negative evidence opposed to it. There is the further very important objection to cremation that, in cases of poisoning in which suspicion is not aroused until some time after death, all positive evidence of the crime would be destroyed.

From the Section on Anatomy and Pathology Dr. Wilmer Brinton furnished a succinct account of the advances in pathology during the year, dwelling particularly on the discussion over the bacillus of cholera and Friedländer's micrococcus of pneumonia.

Volunteer papers of merit were also read,—"Upon Rectal Medication," "Hydrochlorate of Cocaine in Nose- and Throat-Surgery," "Treatment of Hay Fever," "Stricture of the Urethra," and "Gunshot-Wounds of the Abdomen."

Dr. John R. Quinan, the author of "Medical Annals of Baltimore," was elected President for the ensuing year. G. H. R.

Baltimore, May 16, 1885.

CHICAGO.

THE last of our medical schools has closed its doors for a brief season, and comparative quiet now reigns in and about the college-buildings. With each winter session the competition among our local schools becomes more sharp and jealousies more pronounced, each vying with the other in a brilliant array of inducements, wares displayed at attractive prices, often very, very cheap in every sense. The coming student looks the field over, and may indicate to a senior friend some preference. The senior friend may express himself as favorable to the choice, giving the new man assurances that in this particular school the examination for admission is especially easy, and that the faculty at the close of each session hires the largest theatre and secures the services of the biggest brass band to be had, topping all off with a big banquet and the "finest" politicians.

Competition of this kind can hardly result in permanent good to any concerned, and to the thoughtful mind the remedy suggests itself in coalescing all these schools and the organization of a superior institution from better material. A single good faculty might be selected from the several now existing here, and the patronage would be sufficient to maintain the institution at a high standard; then the removal of this unwholesome struggle for existence would give tone and independence. The Harvard Medical School has been enabled to attain its present high standard probably as much from the absence of local competition as from any other cause.

The last report of the Secretary of the Illinois State Board of Health contains some reference to medical education. He states that the applications of the new graduates, beginning with the present quarter, have attracted special attention, because of the indications contained therein regarding the good faith of colleges claiming to exact a preliminary examination of would-be matriculants.

From one college pretending to exact a preliminary examination seven graduates applied to the Board for permission to practise in the State; five of these showed at once and conclusively that they could not properly pass the most simple requirements for matriculation. The report also shows that many schools have a sliding scale that can be adjusted to the tastes and capacities of any man ambitious of medical honors.

Some announce that the preliminary examination is confined to those who may intend to practise in States where this examination is made a test of the standing of the college. Of course, with other matriculants it is made optional.

For the accommodation of those who may not like either extreme, some schools are satisfied with a certificate from the preceptor. So far as the Medical Practice Act concerns the notorious advertising quacks of Chicago, it is a dead letter, there being now a larger number of "lock-hospitals," "infirmaries," "vacuum" and "electrical" institutions for the special treatment of young and middle-aged men than ever before.

A few weeks ago the subject of hypnotism was discussed before the Chicago Medical Society. The process was to be demonstrated upon two or three subjects brought into the meeting for the purpose.

As soon as two of them were hypnotized the members of the Society made a critical examination of each, and found reason to offer some severe criticism, by far the larger number of observers believing the so-called phenomena to be merely expressions of studied parts. The orator appeared much dissatisfied, and further discussion was carried on through the daily papers, the chief object of which would appear to be the advertisement to the laity of a little book on insomnia. The whole matter was not calculated to impress favorably the profession of this city.

The waste of water supplied by the city for domestic and other purposes appears to be enormous. The last report of the Commissioner shows the supply for the year to have been 29,286,000,000 gallons, a daily average of over 80,000,000. The daily consumption of water during the year averaged nearly 114 gallons per capita, and it is no exaggeration to say that one-half of this quantity was unnecessary waste. Notwithstanding this supply is so much in excess of all needs, the Commissioner says that measures for increasing the pumping capacity cannot longer be postponed, and he recommends the construction of a new independent inlet from the lake, together with new and independent pumping-works.

In consequence of the great strain upon the present capacity of the works, the water has been from time to time quite turbid, exciting the suspicions of consumers as to its wholesomeness, some believing and asserting that it contained sewage,—a belief that has been stimulated and fostered by sensational newspaper nonsense, and by statements of doctors needing a little cheap advertising for themselves and their microscopes.

"It's an ill wind that blows nobody good." This water-scare is proving a harvest for mineral-water men and brewers. M.

CHICAGO, May 18, 1885.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

A YEAR ago, at the instance of a number of prominent physicians, a Society was organized, just before the meeting of the American Medical Association at Washington, for the purposes of studying the relations of climate to therapeutics, and of establishing more definitely the real value of health-resorts in the treatment of disease. It was natural that such an organization should attract more especially those who are called upon to treat diseases of the respiratory apparatus, as it is for patients of this class that a change of climate is most frequently prescribed. The papers read at the first meeting were, therefore, devoted to the consideration of the relations of climate to diseases of the air-passages, and especially of phthisis pulmonalis. At the present session the essays were of wider range and in greater number, giving evidence of strength and vitality in the young organization which promises a useful career.

The sessions this year extended over two days. They were held in New York, at the Academy of Medicine; Prof. A. L. Loomis, M.D., President of the Association, occupying the chair.

The first business, after calling the session to order, on Wednesday afternoon, May 27, was the

ADDRESS OF THE PRESIDENT.

The object of the organization of the Association had been stated to be "that representative medical men of different sections might come together, and from their different views and experiences endeavor to determine the therapeutic value of the various localities which have been claimed to have the power of arresting or curing chronic disease of the respiratory organs, and to discuss their etiology, pathology, and treatment." The diseases of the vascular system and the therapeutic value of our mineral springs were also, in his opinion, accessory subjects worthy the attention of the Association. The study of sanitation and appropriate health-resorts for different chronic disorders, he thought, had been too much neglected. Through properly-organized committees the Association might determine the real merits of the various health-resorts which at present and may in the future claim patronage and support. It should endeavor to place those that are found worthy of its endorsement under the supervision of intelligent physicians, who, by the aid of local authorities and perhaps by legislative enactment, may render them more efficient for the cure of those diseases to which they are especially adapted. He referred for illustration of the usefulness of such wise administration to the Adirondack Cottage Sanitarium, under Dr. E. L. Trudeau, situated near Saranac Lake Village. It is an attempt to put within the reach of patients of moderate means, suffering with pulmonary disease, the benefits to be derived from the Adirondack climate. The cottage plan has been adopted, the small buildings being clustered around a commodious main building, where the food is served. The advantages of this Sanitarium were considered in detail, taken from Dr. Trudeau's report.

As the subject proper for the address the President named "The Influence of the Recent Views of the Etiology and Morbid Anatomy of Pulmonary Phthisis on its Climatic Treatment."

Three distinct views of the etiology and morbid anatomy of phthisis prevail at the present time:

1. It is an inflammation of pulmonary substance which may or may not be complicated with tubercle.

2. Tubercle is the primary and essential lesion of all phthisis.

3. It is constituted by the presence of a specific material, which may or may not be accompanied by the histological elements of tubercle, but which always has a specific form of bacillus as the sole exciting cause of its development.

Whatever conclusions may finally be reached as to the exact nature and cause of phthisical processes, he said that clinically we must always recognize two varieties of phthisis:

(1) *Acute Phthisis*, the morbid changes of which are a complex of inflammation and the rapid development of tubercular tissue in the lung-substance.

(2) *Chronic Phthisis*, the essential pathological character of which is consolidation and induration of lung-substance: tubercle may or may not be its primary lesion, but it is usually present in its advanced stages. During the past two years his own examinations of the lungs of those who had died with the clinical history of chronic phthisis have convinced him that in advanced phthisical processes tubercular tissue can always be found, but he was not prepared to state that the development of tubercle is the primary

lesion in all or in the majority of cases. In very many he is confident that a non-specific infiltration of the lung precedes tubercular invasion and furnishes suitable soil for the development of tubercle, as well as for the growth and multiplication of tubercle-bacilli when present. Koch's claim "that the repeated entrance into healthy lungs of small numbers of the specific bacilli of tuberculosis will cause chronic phthisis, and that the simultaneous admission of numerous bacilli will produce acute phthisis," stands as yet unproved.

If phthisis have its origin in an infection, it seems evident, from a clinical as well as a pathological stand-point, that certain preparatory tissue-changes must take place in the lungs before the infection can be received, or, in other words, before bacillary invasion can take hold and become effective for evil. Both experiment and observation seem to show that these bacilli, whether developed inside or outside the body, cannot thrive unless certain conditions are present.

All pathological speculations must be brought to the crucial test of clinical experience; the facts drawn from direct observation must not be allowed to be warped or strained in the slightest degree. By this standard there are three factors which may be regarded as preparatory to the phthisical infection, if such infection shall be found to exist:

First. A state of constitutional feebleness, either inherited or acquired, which diminishes the resisting power of the individual and renders him abnormally susceptible to diseased processes.

Second. A condition of the upper portion of the lungs, brought on by feebleness and slowing of the circulation, which favors the development of diseased processes.

Third. The establishment of localized inflammatory processes in the bronchi, lung-substance, or pleura.

He believed that no one will question the statement that the treatment of phthisis which is to-day attended by the best results is that which has for its object the invigoration by every means possible of the general health, and the avoidance of those conditions which predispose or favor local pulmonary inflammation.

An appeal to clinical medicine for the means of fulfilling these therapeutical indications is answered by "good hygiene, good food, and suitable climate, and those medicinal agents which promote and maintain that normal performance of the digestive and assimilative processes which are essential to healthy nutrition."

The most essential of these is suitable climate, which acts by its invigorating effects upon the general system, and, secondly, by its local effects on diseased lungs in preventing and arresting diseased processes. The essential requisite factor of a good climate is pure air. As pointed out by Jaccoud, there are many points to be considered in discussing the availability of a certain climate other than those which can be found in meteorological tables. Diversity of opinion exists as to the principal feature to be studied in climatology of health-resorts, but the lecturer believed that "purity of atmosphere and consequent freedom from germs" seems to offer a more satisfactory solution of this problem than any other which has been suggested. In the presence or absence of these organisms is to be found an explanation of the therapeutical differences in the air of different localities. Sir John Lubbock, in his address before the British Medical Association, stated that the smallest sphere of organic matter which can be distinctly defined by the microscope is about 1–180,000 of an inch in diameter, and a particle of this size would contain many millions of molecules which may be the germs of organic life. Such a thought opens a wide field for the origin of the microbes of disease, even when we shall have become familiar with the different species of every known infection.

Referring to Professor Tyndale's observations upon atmospheric germs of living organisms, and to the statement of Dr. Andrews that "the micro-organism which excites phthisis, whatever it may be, at certain altitudes is no longer met with," he was led to the observation that purity of atmosphere is the essential therapeutic agency in high latitudes; all elevated regions do not furnish it, however.

Another climatic condition of great importance, and as essential as altitude to the purity of the atmosphere, is *porosity of the soil.* Dr. Bowditch originally called attention to this in 1862, and Dr. Buchanan, in his report to the Privy Council, confirms the statement that *dampness* of the soil is one of the most prolific causes of phthisis to the inhabitants living upon it.

The presence of extensive evergreen forests has been found to have a powerful purifying effect upon the surrounding air. Winds, on the contrary, are prejudicial to the consumptive.

Ozone and atmospheric electricity are elements in the local climatology of health-resorts which deserve careful study: they doubtless have much to do with the therapeutic effects obtained by change of residence.

In conclusion, he considered the state of the patient, and warned against sending patients away from home who were already too ill to be benefited. Hyper-excitability of nervous system, much febrile movement, or serious organic involvement would forbid such a change: there are many who would be injured by the fatigue of travel more than they would be benefited by the climate.

ANTISEPTIC INHALATIONS.

Dr. BEVERLY ROBINSON read a paper recommending antiseptic inhalations in the treatment of chronic bronchitis and phthisis, and exhibited a simple form of inhaler made of perforated zinc, which was cheap, clean, and efficient. The apparatus covered the mouth and nose, and contained an apartment for cotton saturated with the medicament. The inhaler could be worn from half an hour to several hours daily, or all night if desired. The following points in favor of this method of treatment were cited:

1. The apparatus required costs but a trifle, and therefore may be used even by the poorest classes. 2. Medication thus applied may be employed under circumstances where the use of hot or cold sprays is impracticable. 3. There are no risks of future colds attendant upon its employment. 4. The relief afforded by dry-vapor inhalations was, in his experience, frequently greater than that given by the other methods of inhalation. 5. This medication is well adapted to all forms of irritative disease of the respiratory passages.

The only objection that can be urged against their use is want of efficiency of the ordinary form of inhaler, with which the medicated vapors do not pass deeply enough into the pulmonary cells to modify their structure to any sensible degree. To the objection of Dr. A. Hill Hassall (*Lancet*, March 5, 1883) that "the substances used are not very volatile, and that only an inconsiderable amount, if any, enters the lungs," the statements of patients were given as a set-off: not only were patients improved in health, but they also noticed a change in the appearance of the sputa and a reduction in their quantity. Vapors certainly penetrate more deeply than the sprays, for which they have been substituted. He was also of the opinion that the small amount of substance which was not recovered in Dr. Hassall's experiments, and which *possibly* does penetrate the pulmonary air-cells, is sufficient to modify notably, after several days or weeks of more or less continued inhalation, the inspired air in such a manner that it is made comparatively aseptic, and thus we have an influence for good that we can properly estimate only by the evident effects produced. According to the lecturer's observations, pulmonary cough is largely due to irritation produced at the apices, reflex in character.

Dry inhalations were introduced by Dr. N. N. Roberts, of Manchester, England, and were afterwards used by Dr. H. Curschmann, of Hamburg, William Pepper, J. Solis Cohen, and others. His own experience embraced twenty-three cases (of which he had kept records) of *primary catarrhal or tubercular phthisis*. In four of them there were marked pleuritic adhesions. In the remaining cases no statement is made other than the fact that pulmonary consolidation at the apex or apices was present. Nineteen cases of *catarrhal or tubercular phthisis in the second stage* were treated partly by oro-nasal inhalers. Of these, eleven had one-sided softening, in two both apices were affected.

There were six cases of *fibroid phthisis* treated by inhalers, and three cases of *laryngeal phthisis*, in one of which there was commencing carious ulceration of the vocal cords. There were two cases of acute, seven of subacute, and three of chronic, laryngitis, with cases of bronchitis, two acute and three chronic; and five cases of chronic nasal catarrh, with one case of pharyngitis and two of localized pleurisy, and one of paralysis of the tensors of the vocal cords,—making seventy-six cases in all, which were the basis of the present paper.

The results of his observations seemed to show that the most generally useful inhalation in the beginning of pulmonary phthisis is creasote and alcohol (equal parts). The amount is about ten to twenty drops, used two to three times in the twenty-four hours, dropped upon the sponge of the zinc perforated inhaler. The time of inhalation was gradually extended to fifteen minutes; more than this caused irritation and cough. The form of inhaler was like that of Burney Yeo, of London, or S. S. Cohen, of Philadelphia. He described the various forms of inhalers in use, and pointed out some advantages, and spoke approvingly of the simple shield of perforated zinc provided with a small sponge for holding the medicament. He suggested (1) that the holes should be made large, so as to admit air more freely; (2) the posterior half of the inhaler not to be perforated at all, but to consist of one uniform piece on each side; (3) a double valve arrangement to allow the expired air a ready exit from the inhaler without passing again through the sponge. With these modifications the inhaler might be made so as to be worn both day and night, almost continuously.

The general treatment of his patients was malt and cod-liver oil, compound syrup of hypophosphites, and iron and arsenic. He also used counter-irritation, digitalis, quinine, stimulants, and good food. As these remedies had been faithfully tried before without benefit, he could only attribute the subsequent difference in the effects of treatment to the antiseptic inhalations.

The histories and results of a number of illustrative cases were communicated, showing admirable effects for this plan of treatment in ameliorating symptoms in some cases, and arresting disease in others.

DISCUSSION.

Dr. F. C. SHATTUCK, of Boston, in opening the discussion, said that he had not been able to observe very decided results from his own trial of this method, and had found it difficult to keep up. The reported influence in reliev-

ing cough, however, he thought warranted the use of the inhaler, for it is a great desideratum to have the cough properly held in check, especially when it can be done without administering remedies by the stomach and thus disturbing digestion and appetite.

Dr. WESTBROOK thought that the good results of the treatment might be ascribed (1) to the uniform temperature and moisture of the air passing through the inhaler, and (2) to the balsamic vapors, which have a very soothing effect upon the mucous membrane when supplied for a long time. This is shown in relieving the irritability of the larynx and reducing cough, and the benefit in chronic bronchitis and phthisis may be ascribed to this source. He noticed that the lecturer did not use this alone, but also relied upon constitutional treatment by cod-liver oil, malt, etc. The inhalation lessens irritability of upper air-passages, reduces the amount of secretion, and gives the patient rest. He did not think that facts would warrant the statement that more cough attends disease of the apex than lower down in the lung.

The PRESIDENT stated that cough in phthisis, especially the violent paroxysmal attacks of coughing, is very largely due to pleuritic changes, and these pleuritic adhesions are more likely to occur in the upper part of the lung. Often they cannot be detected by examination of the lungs. Inhalations do good as anodynes to the air-passages, especially moist inhalations. He cautioned against the use of strong inhalations, as they might cause irritation. He had seen hemorrhages after such inhalations, but did not attribute the hemorrhage to the inhalation: he noticed it as a coincidence.

Dr. ROBINSON, in reply to a question from Dr. Reed, said that he had used ether both alone and in combination with balsams, but found it irritating, and prefers chloroform (gtt. ij). He believed that the vapor entered the air-cells, on account of the changed and diminished secretions. The principal object is to make the air inhaled as pure as possible. If the patient cannot get to the mountains, the mountain-air must be brought to the patient. He reiterated the statement that cough is more frequent when the apex is involved than in affections of other portions of the lung. He could not accept the view that pleuritic adhesions are the common cause of cough; he had not found it so post mortem; and, moreover, if the cough had such an organic cause it would not subside so quickly as it does when the patient goes to the mountains from the city.

Dr. W. C. JARVIS, of New York, read a paper entitled

CATARRHAL AFFECTIONS OF THE NASAL CAVITIES AS A CAUSE OF PULMONARY PHTHISIS.

After describing the anatomy of the parts and the effects of imperfect drainage of the nasal sinuses, he announced the following conclusions:

In determining the relations of nasal catarrh to pulmonary phthisis, he had, in the order of its origin and sequence, commenced by observing and interpreting the catarrhal manifestations as they occur in the nares, and had traced the gradual extension of the nasal disease to the larynx. Within the larynx he discovered the impress in the form of a chronic irritative hyperæmia of the larynx, brought about by the combined action of catarrhal discharges, habitual mouth-breathing, and inflammatory extension. Attacks of acute laryngitis, sometimes followed by bronchitis, are often observed in individuals exhibiting chronic hyperæmia of the laryngeal lining membrane. He recognized the deviated septum as a most common cause of nasal catarrh, producing this disease by pressure and irritation, interference with nasal drainage, and unequal distribution of the nasal respiratory functions. He pointed out the importance of heredity, as a factor responsible for the existence of certain forms of deviated septum, and noted the conditions indicating the hereditary character of these abnormalities.

Viewing the larynx as really the upper portion of the lung, although divided from it on artificial anatomical grounds, we are enabled to determine approximately by the appearance of the laryngeal and tracheal mucous membrane what conditions may exist beyond the line of laryngoscopic vision, and thus complete the pathological picture, beginning in the nares and ending in the lungs.

Appended to this paper were the clinical reports of a few illustrative cases, showing the benefits of treatment directed to the upper air-tract in chronic pulmonary disease.

DISCUSSION.

Dr. BOARDMAN REED said that from the stand-point of the general practitioner he could see no special connection between nasal catarrh and phthisis. Both were frequent, but he had seen them separate more frequently than combined. He did not see any necessary connection between them.

Dr. ROBINSON thought that the title of the paper was open to criticism. He did not think that clinical experience warranted the view that there is any direct connection between the two morbid states, such as cause and sequence.

Dr. GOODWILLIE had not been able to determine any direct connection between the depth of the vault of the palate and the nasal chambers. He believed it to be caused principally by the greater development of the alveolar ridges in some. This did not affect the nasal cavities, however, but if the intermaxillary bone were pushed back it would produce contraction of the nasal meatus.

Dr. JARVIS said that he had not attempted to prove the relationship of nasal affections to phthisis, as he thought that such a connection

had been pretty well settled, as it has been accepted by Niemeyer, Billroth, and Koch, in Germany. He had merely shown how such results might follow. He had been particular in his statement that not all high palates were accompanied by nasal catarrh, but only those with the abrupt elevation of the middle ridge. The existence of an intermaxillary bone is doubted by some of the best embryologists.

Dr. ROBINSON, by permission, said that he did not wish to criticise the paper, but merely to state that the conditions pointed out were quite rare, while phthisis is common. With due respect, he did not feel willing to accept the authorities quoted, who are not accustomed to looking into the larynx or nasal passages.

The President announced as members of the Nominating Committee Drs. F. C. Shattuck, Boardman Reed, B. F. Westbrook, J. C. Wilson, and E. D. Hudson, Jr.

A NEW INSTRUMENT.

At the evening session Dr. JARVIS exhibited a scoop constructed for the purpose of removing adenoid vegetations from the vault of the pharynx. It is made of steel, cylindrical and flattened at the extremity, which is directed upward so as to pass behind the soft palate. He had also found it useful in removing carcinomatous masses.

Dr. BOSWORTH thought that the instrument would be an improvement upon the gouge. He said that the more he saw of cases of nasal catarrh in children, the more he became convinced that the majority of them—say nineteen out of twenty—are due to hypertrophy of the glandular tissue, and not due to hypertrophy of nasal mucous membrane. Therefore he thought remedial measures should be directed to the pharyngeal vault rather than to the nasal passages.

FURTHER CONSIDERATION OF PNEUMATIC DIFFERENTIATION, WITH DEMONSTRATION OF THE PNEUMATIC CABINET.

Dr. H. F. WILLIAMS, of Brooklyn, exhibited an iron cabinet, with glass front, large enough to hold a patient in a sitting posture, which was so arranged as to permit partial exhaustion of the contained air and the admission of air under pressure for inhalation. The paper described the apparatus and the principles of treatment (already described in *Medical Record* for February 13). He believes that there is a position in our therapeutics for pneumatic differentiation in the treatment of pulmonary disorders, and this method presents some points worthy of further inquiry. The five cases referred to in the previous article on the subject are still doing well. He insisted upon the importance of early treatment of phthisis. Children should be taught to breathe properly. Many persons pass their lives in seeking what they can never attain, —perfect health. In many cases relief and improvement is all that can be expected. The results from the pneumatic treatment have been very satisfactory. It is possible that it might be abused by unskilful hands, and do injury, but he had never witnessed any bad results attributable to the use of the cabinet. One case used the treatment for some thirty times safely, but hemorrhage came on shortly after stopping the treatment. He had never seen a hemorrhage come on during the use of the cabinet. In connection with the cabinet, medical inhalations are practised under pressure, and the usual constitutional treatment employed. The method is applicable not only to phthisis pulmonalis, but also to emphysema.

Remarks were made by the PRESIDENT, Dr. ARMOUR, of Brooklyn, and others.

HOME-TREATMENT OF CONSUMPTION.

Dr. F. C. SHATTUCK, of Boston, read a paper advocating a more intelligent home-treatment of consumptives, in view of our advanced knowledge of the nature and course of the disease. He compared the statement made by a French professor twenty years ago, "The treatment for phthisis is opium and lies," with the recent teaching by Jaccoud that "pulmonary phthisis is curable in all its stages." Cases of consumption get well under the climatic treatment, and even under no treatment at all. By statistics taken from the Massachusetts State Board of Health Reports, he demonstrated the fact that there has been a gradual, though not regular, decline in the mortality from this disease from 1857, when it was 33.93, to 1883, when it was 29.90 per thousand of all classes of the population.

"Phthisis—or the bacillus tuberculosis, if you please—is one of those weeds which flourish best upon poor soil, but at the same time it exhausts what little virtue may be remaining in the soil."

The lecturer then considered in detail the regimen suited to a consumptive, and advocated the use of palatable, nutritious, easily-digested food, taken frequently; moral treatment; sensible dress, including woollen under-garments; fresh air, exercise, sun-baths, congenial occupation, cleanliness of person, and respiratory gymnastics.

The medical treatment was then outlined. Cod-liver oil is to be avoided if the tongue is coated or digestion defective. He recommends a combination of morphine, atropine, and capsicum for the relief of cough, diarrhœa, and night-sweats. Quinine is useful in large doses for the fever, either by the mouth or hypodermically (in the latter case the hypobromite is the best preparation). The salicylate of sodium is also valuable where the fever is caused by resorption.

The paper was favorably discussed by Drs. ARMOUR, KRETSCHMAN, and ROBINSON, the latter regretting that the author had omitted

three methods of treatment: (1) forced feeding, "lavage and gavage;" (2) intra-pulmonary injections; (3) antiseptic inhalations.

On the second day the morning session was opened by the reading of a paper sent by CHARLES DENNISON, M.D., of Colorado, entitled

A RULE FOR THE EVEN DIVISION OF CLIMATE, BASED UPON THE AVERAGE OF THE COMBINED ATMOSPHERIC HUMIDITIES IN THE UNITED STATES.

This was read, in the absence of the author, by J. H. Tyndale, M.D., of New York.

It was a continuation of a paper presented last year, and was accompanied by maps showing graphically the relative dryness, mean temperature and elevation, direction of winds, and average amount of sunshine in different parts of the United States, made in conjunction with the Signal Service Bureau.

He believed that the most important quality of climate is dryness. The range of temperature is of greater moment than the mere statement of averages or means, which are very misleading.

The President, in opening the discussion, said that there was a great deal of interesting information contained in the maps, but they did not include everything to be considered in comparing health-resorts. He referred to the porosity of the soil as a very important feature. Dr. Bowditch in 1862 had shown the relation existing between humidity of the soil and pulmonary disorders. It is not the amount of rainfall or the humidity of the atmosphere so much as the natural drainage of the soil which is to be considered. Apparently everything theoretically would be against the Adirondack region as a health-resort for consumptives; but the porosity of the soil, there being no clay in it, makes it what it is.

Dr. BELL thought that reliable statistics contradicted the views that dryness is the most important point in the atmosphere to the consumptive, and that the great danger is moisture. The number of deaths per thousand of population from phthisis pulmonalis is about the same in Colorado as in Florida, which is very damp. Forests are great storehouses of moisture, and yet they are salutary. At sea the atmosphere is saturated, and yet from the reports of the Marine Hospital Service of England it has been shown that the number of deaths among sailors from consumption is ten times less than among similar numbers on shore, and if compared with men of the same age the death-rate is only one-sixteenth that of landsmen. Moisture is therefore not the most dangerous element in an atmosphere. The writer should also have referred to ozone and atmospheric electricity as important factors in a good climate. In conclusion, he opposed the idea that excessive dryness and altitude are the essential qualities of a good climate for consumptives.

Dr. BOARDMAN REED was glad to hear the protest of the preceding speaker against regarding altitude and dryness as essential in the treatment of consumption. He thought that the patients are benefited by agreeable society as well as by pure air. The sea-shore has a long-established reputation as a health-resort, and his own observation was that in Atlantic City many pulmonary patients do well. He referred also to the ozone developed by the spray beating on the shore.

Dr. TYNDALE, in conclusion, repeated the statement that altitude, dryness, and equability of temperature were the main points worthy of consideration in the ideal climate for consumptives.

GEOGRAPHICAL DISTRIBUTION OF PHTHISIS IN MICHIGAN, WITH SKETCH OF TOPOGRAPHY.

This paper was contributed by E. L. SHURLEY, M.D., of Detroit, Michigan, and was read by the Secretary.

Regarding the telluric and geographical aspects of health-resorts for phthisis as of great importance, Dr. Shurley undertook a systematic investigation of the climatic qualities of Michigan. Without attempting an analysis of this valuable contribution, it may simply be noted as a significant fact that in those counties where the soil was loose and sandy and permitted free drainage he could not discover that a single case of pulmonary phthisis had originated.

"The Treatment of Laryngeal Tuberculosis" was read by title in the absence of its author, Dr. E. F. Ingalls, of Chicago.

"The Problem of Acclimatization" was the subject of a paper contributed by I. H. Platt, M.D., of Brooklyn. (See page 676.)

At the afternoon session J. C. Wilson, M.D., of Philadelphia, read a paper entitled

REMARKS UPON THE CLIMATE OF FLORIDA.

Dividing the peninsula into four parallel strips or regions, we have (1) the Atlantic seaboard, (2) the St. John's River, (3) the elevated pine-lands forming the water-shed of the State, and (4) the Gulf coast. The great characteristics of all these regions are mildness and equability. Within a year the railroad has opened up the Gulf coast, which possesses special peculiarities. Here is the perfection of warm maritime climate, from Cedar Keys to Punta Rassa. The atmosphere is pure, free from dust, and rich in ozone; the temperature mild and equable; the movement of the air moderate, but continuous. The air is remarkably dry, the rainfall is small. The small peninsula terminating in Point Pinellas on Tampa Bay offers especial attractions as a sanitarium. There are no frosts and no malaria, and the water of the bay is sufficiently warm to permit bathing all the year round.

JOHN M. KEATING, M.D., of Philadelphia, also read a paper upon the same subject, but paying especial attention to the lake region as a winter health-resort. A caution was expressed against sending patients to Florida without definite ideas of their destination. Both St. Augustine and Jacksonville are undesirable, as a rule, for consumptives. The accessibility of Florida gives it especial value for sanitaria.

THE RESULTS OF THE HOME-TREATMENT OF CONSUMPTION CONTRASTED WITH THOSE OF CHANGED RESIDENCE AND CLIMATE

was the subject of a paper read by Dr. E. D. HUDSON, JR., of New York.

The pathology of phthisis was discussed according to recent views, and a favorable view taken of the possibilities of home-treatment with the aid of modern appliances.

HAY FEVER AND ALLIED AFFECTIONS.

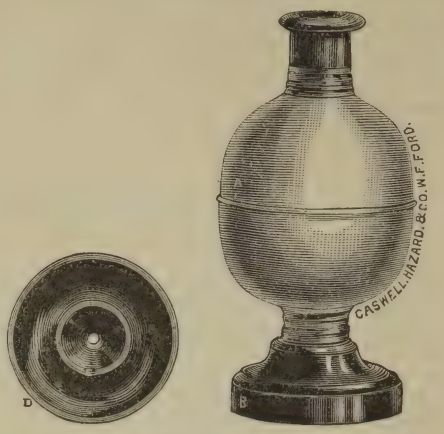
F. H. BOSWORTH, M.D., of New York, called attention to the etiology of hay fever and the relation of nasal hypertrophies to spasmodic attacks of cough. He denied that there was any structure in the nasal passages to which the name erectile tissue could properly be applied. He advised operation by cautery and the correction of abnormalities in the nasal chambers in cases of hay fever and allied affections.

THE HISTORY OF THE STETHOSCOPE.

Dr. D. M. CAMMANN read a paper with this title, and presented a modification of the Cammann Stethoscope.

Laennec, if he did not originate the idea of the stethoscope, made it practically useful. His first instrument was a cylinder of wood perforated by a bore three lines wide. This was modified by Piorry, who constructed a more slender instrument. Trumpet-shaped ends were first devised by Dr. Williams about 1843. Descriptions of many non-aural stethoscopes made of various materials are found scattered through the files of medical journals. About 1850, Landouzy, of Paris, constructed a binaural instrument with flexible tubes. Previous to this Dr. Williams had used a double stethoscope, but it was inflexible and awkward of application. The stethoscope of Dr. Leared, shown at the International Exhibition of 1851, was an improvement on these.

In the same year Dr. Marsh, of Cincinnati, patented a double stethoscope. Dr. Cammann was familiar with the principle of these instruments. His binaural stethoscope, therefore, was not a new invention, but was and is now the best instrument of the kind devised. It was perfected in 1852, and described in the *New York Medical Times* of January, 1855. Reference was made to the differential stethoscope of Scott Alison, the hydrophone, and the stethoscope of Constantine Paul.



The modification of Cammann's stethoscope can be screwed on in place of the usual chest-piece. In the pectoral end is an air-chamber, which is completely closed by pressure against the chest. Connected with this chamber by a small tubular opening is a rubber bulb, through which the sound-conducting tube passes. By pressure upon this bulb, when the instrument is held in position, the air is exhausted in the hollow chamber and the stethoscope is held firmly to the chest-wall. It requires some practice to use this modification successfully. By its use the closest possible contact is obtained with the parts under examination. Sound, in passing to the ear, is conveyed through two hollow chambers,—one in the chest-piece and one in the rubber bulb,—both of which act as resonators and increase its intensity. Not only is the intensity of sounds increased, but their true quality is better appreciated. Another advantage is that the two hands of the auscultator are left free to practise the method of auscultatory percussion, a method which has not yet received the attention it deserves, and which, it is to be hoped, will come into more general use.

At the business meeting the following officers were elected:

President.—Wm. Pepper, M.D., of Philadelphia.

Vice-President.—F. J. Knight, M.D., of Boston.

Secretary and Treasurer.—J. B. Walker, M.D., of Philadelphia.

Next place of meeting, Philadelphia, in May, 1886, upon a day to be decided by the Council.

THE AMERICAN MEDICAL ASSOCIATION.

(Continued from page 664.)

SECTION ON SURGERY AND ANATOMY.

DR. DUNCAN EVE, of Nashville, Tennessee, Chairman; Dr. C. B. King, of Allegheny, Pennsylvania, Secretary.

False Doctrines in the Treatment of Frac-

tures, by John B. Roberts, M.D., of Philadelphia, Pennsylvania. Among the doctrines or practices which the author considered to be bad, were the primary application of a bandage before putting on a splint (usually unnecessary and often does damage); too early passive motion; splints kept on too long; too much delay in trephining fractures of the skull; axillary pad in fracture of the clavicle, and interosseous pad in fractures of the forearm, which are useless.

This paper was successful in eliciting a general discussion.

The Treatment of Compound Fractures by Free Drainage and Wiring of Bones was the title of a communication presented by Dr. W. P. Verity, of Chicago. He recommended a conservative course in the treatment of such fractures, and reported cases in which by wiring loose fragments together he had obtained successful results. The paper was illustrated by diagrams.

Dr. H. O. Marcy read a paper answering affirmatively the question, "Do we find from Micro-Organisms in Closed Cavities a hitherto Unsuspected Danger to Surgical Lesions?" He had found several instances of micro-organisms existing in ovarian fluids.

Surgical Treatment of Cysts of the Pancreas was the theme of a valuable paper read by N. Senn, M.D., of Milwaukee, Wisconsin. He concluded, after a careful and exhaustive review of the subject, that cysts of the pancreas are true retention-cysts; cicatricial contraction or obliteration of the common duct or its branches, and impacted calculi, are most frequent causes of cysts of the pancreas; a positive diagnosis is impossible, a probable diagnosis between it and other cysts amenable to surgical treatment is enough for practical purposes; and, finally, that the formation of a pancreatic fistule under antiseptic precautions commends itself as the safest and most expedient operation in these cases.

Dr. Joseph Ransohoff, of Cincinnati, reported an instance of *Two Ovariotomies on the same Patient*, in a woman 26 years of age at the last operation, the previous one having been done two years before. At the first operation the right ovary was removed and the left allowed to remain, although it was increased in size. The author of the paper inclined to conservatism, both because of the slight mortality of the second operation as compared with double ovariotomies, and because in some cases of consecutive ovariotomy the patients had conceived and borne children in the interim.

Dr. R. H. Jenkins, of Georgia, reported a case of *Necrosis of the Tibia and Fibula of Ten Years' Duration*, which was cured by removal of the dead bone. The patient made a good recovery and has a useful limb.

Colo-Proctitis treated with Hot Water Douches and Stretching or Division of the Sphincter Ani was the subject of a paper by Dr. A. Y. P. Garnett, of Washington, D.C., in which accounts were given of several cases greatly benefited by a milk diet, and the irrigation of the rectum with hot water containing opium or ipecacuanha.

Several papers were read by title, among which were "Clinical Observations on the Surgical Treatment of Varicocele," by M. H. Henry, M.D., of New York, and "A New Combined Trocar and Canula and Operating Needle," by H. L. Getz, M.D., of Marshalltown, Iowa.

Dr. Formento, of Louisiana, read a paper on *Autoplasty*, which was illustrated by several cases successfully operated upon.

A patient with a growth in the temporal region was shown to the Section, and after examination by a committee it was pronounced a fibroma.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

THE Thirty-Sixth Annual Meeting was held, May 27, 28, and 29, at Scranton, with the Lackawanna County Medical Society. The session was well attended. Dr. Ezra P. Allen, of Bradford County, President of the Society, occupied the chair.

First Day.—Upon calling the meeting to order at the opening of the session, Dr. I. F. Everhart, Chairman of the Committee of Arrangements, delivered an Address of Welcome, and presented the programme for the meeting. Hon. Alfred Hand then delivered an address on the part of the citizens of Scranton, which contained a humorous comparison of the relative advantages and disadvantages enjoyed by the members of the two professions of law and medicine.

Dr. Henry H. Smith read a telegram announcing the passage of the act establishing a State Board of Health by the Legislature at Harrisburg.

Dr. Benjamin Lee, of Philadelphia, offered the following resolutions, which were adopted:

"*Resolved*, That this Society has learned with great satisfaction of the final passage through the Legislature of this State of the act to create a State Board of Health, and that it hereby tenders its thanks to the Hon. Robert Adams, Jr., Senator from Philadelphia, and to Hon. Henry K. Boyer, Representative from Philadelphia, for their earnest, untiring, and successful efforts to secure to the people of this great commonwealth so important a safeguard as is anticipated from the organization of this Board.

"*Resolved*, That the Secretary be instructed to mail promptly a copy of this resolution, duly attested by the appropriate officers of the Society, to the above-named honorable gentlemen."

These were unanimously adopted, amidst much enthusiasm.

Drs. D. Colvin and C. G. Pomeroy, of the New York State Medical Association, were introduced and invited to take part in the deliberations. Each made brief remarks.

Dr. Buzby, of the New Jersey Association, was extended a similar courtesy. He returned his thanks, and invited the Society, as a whole, to attend the annual meeting of the New Jersey Association to be held at Long Branch.

Dr. John B. Roberts, of Philadelphia, presented the report of the delegates from the Pennsylvania State Society to the American Medical Association in New Orleans, and Dr. M. O'Hara presented the report of the delegates from the Pennsylvania Society to the New Jersey State Medical Society.

There were no further reports regarding State Societies.

The report of Dr. John G. Lee as Corresponding Secretary, and one from the Publication Committee, were received and approved.

Dr. Germer, Health-Officer of Erie, and Prof. Osler, of the University of Pennsylvania, who were present, were invited to take part in the proceedings.

Drs. Atkinson and Lee, a majority of the Committee on a State Board of Health, presented a report detailing their successful efforts in having the Health Bill passed by the Legislature.

The Committee was discharged with thanks, and $49.25, expenses, ordered to be paid.

On motion of Dr. Smith, a memorial was ordered to be prepared and signed by the members of the Society, requesting Governor Pattison to sign the bill.

The Treasurer, Dr. Benjamin Lee, presented his annual report.

Drs. Paine and Bishop were appointed auditors of the Treasurer's accounts.

Amendments to the constitution, proposed by Dr. O. H. Allis, providing for a Librarian for the State Society and providing that debate on essays shall come up under the head of unfinished business, were laid on the table.

Dr. James Tyson, chairman of the Committee on Medicine, read the report of the Committee on the Collective Investigation of Disease, especially directed to pneumonia. He suggested that two additional members of the committee be appointed, on account of the amount of labor required in gathering data.

On motion of Dr. Cohen, Prof. Tyson's suggestion was adopted.

Dr. Henry H. Smith offered a resolution to the effect that any county medical society that shall seek general medical legislation at Harrisburg without having previously obtained the consent of the State Society shall forfeit all its connections with the State Society until it is relieved of its contempt by the Judicial Council. This was done on the ground that it was necessary that the State Society shall be the judge of general legislation. The resolution was adopted.

Dr. Atkinson reported that the auditors had audited the accounts of the Treasurer and found them correct. The report was then adopted.

A partial report was presented from the Committee on Lunacy and Idiocy, especially directed to the management of the early stages of mental disorder.

The address of Dr. S. S. Schultz, of Danville, on "Mental Disorders," was devoted especially to a consideration of the reason for that specialty in medicine concerned with the treatment of insanity, which he declared is found primarily in the peculiar functions of the diseased brain, whose disturbance is followed often by erratic and dangerous conduct. He claimed that such evidence of brain-disorders required the seclusion and rest only afforded by a hospital. Insanity, he contended, is not a disease, but a combination of symptoms, like diarrhœa or dyspepsia. These symptoms are the result of disorder in the instrument—the brain—through which the mind acts. These disorders may be of many kinds, but the laws which govern them are the same as those governing diseases in other parts of the body. The necessity for treatment is, therefore, the same as in other diseases. The lecture was illustrated by reports of cases.

The Address on Hygiene was read by Dr. J. G. Richardson, of Philadelphia.

Dr. Charles S. Turnbull, of Philadelphia, delivered the Address on Otology.

His experience had taught him that, in the treatment of most cases of diseases of the ear, lack of success was due oftener to sins of commission than to those of omission.

This was especially the case in the ear-diseases of childhood. He deprecated syringing, and the use of water in any way, in connection with the cleansing of the external auditory meatus. He urged parents to cease their efforts to cleanse children's ears by the use of soap and water, and told how useless is the little instrument called the "aurilave." He mentioned also some of the dangers accompanying the wearing of ear-rings.

One especially valuable hint to mothers, as well as to those who are to advise them, is that concerning the rearing of young children, whose noses are usually allowed to take care of themselves.

Every child should be taught to blow its nose. If it has not been or cannot be taught to free the nostrils of mucus, its chances for retaining hearing-power in case of the occurrence of acute or sub-acute disease of the middle ear are much poorer than in the case of one that has learned to blow its nose. Handicapped by being unable thus to free its nostrils, a child cannot possibly inflate the tympanum or middle ear, and clear the

Eustachian tubes, so that the dreaded exanthemata must as a rule mean deafness.

Forcible dilatation, by Politzer's method, is generally sufficient in the case of adults, but will not answer for children, who only become terrified by the presence of any one who has been so injudicious as to attempt its use.

For children he recommends that one nozzle of an ordinary auscultation-tube be protected by a perforated "lead-pencil rubber cap" slipped upside down over it. This is called the nose-piece, and can be held firmly, as it plugs one nostril, and acts as a point of support upon which to close the other. As the child cries lustily or else with its mouth blows out (as if to blow out a light), the surgeon, having the nozzle at the other end of the tube in his mouth, blows a quick, short blast into the nasal passage, which invariably inflates both ears. Once assured that the procedure does not cause them pain, children enter into the spirit of it, and blow with a will.

The great secret in the treatment of all discharges from the ears is dependent upon the fact that fermentation and putrefaction soon occur in the moist auditory meatus. So long as a discharge is not allowed to ferment, it will not become fetid, seldom even purulent.

Eczema of the auricle and external auditory meatus, whether in a child or in an adult, is generally a disease of neglect or injudicious interference. In children it is apt to be the former case, in adults the latter, but it is usually induced by the use of soap; in adults it is generally caused by meddlesome attempts at ablution. In children eczema readily yields to treatment, while in adults it is more stubborn, recurring monthly perhaps for several years. Mild cases yield to the constant application of a weak mercurial ointment, while chronic cases require the application of a saturated solution of nitrate of silver.

Boric acid, if properly used, still holds its own as a specific for chronic otorrhœa, though not for acute otorrhœa (except when the discharge is fetid).

This latter class of cases calls for the aqueous boric acid solution.*

For the army of those unfortunate beings suffering from deafness and roaring in the ears, and classified under the head of plastic (cicatricial) inflammation of the middle ear, all treatment remains experimental. Instrumental interference, such as the use of the Eustachian catheter or bougie, the forcible introduction of vapors, etc., except in the hands of an expert, Dr. Turnbull considers meddlesome, as well as useless. Where Valsalva's or Politzer's method cannot be made available, further interference is apt to be harmful.

In the treatment of tinnitus aurium the different preparations of the erythroxylon coca are to be especially lauded, not only because of their direct local effect on the throat and rhinopharynx, but also for their anæsthetic effect on the mucous membranes generally. In this connection hydrobromic acid in conjunction with bromide of sodium is not to be forgotten, especially in cases of tinnitus due to disorders of cerebral circulation dependent upon nervous irritations.

Diseases of the internal ear characterized by profound deafness, and sharp, shrill, ringing sounds, are usually caused by specific disease or traumatism, and seldom yield to treatment. Those of syphilitic origin, which might have yielded to a full specific course, are generally of such long standing that little else is left to be done other than to make a diagnosis.

Dr. Turnbull called especial attention to a disease not unlike boiler-maker's deafness, which he styles "mill-operative's deafness." This is a disease of the auditory nerve, caused by a prolonged succession of concussions and irritation from the rattle and din of the machinery, the first grave and characteristic symptom of which is known as paracousis Willisiana, or the power of being able to hear distinctly only during a noise.

In conclusion, he urged practitioners who are unable to obtain skilled aid immediately not to prescribe without illuminating the external auditory canal with a concave mirror and searching for the cause of deafness. Impacted or inspissated cerumen can always be safely removed by syringing with warm water, which procedure is the only one in which the use of water is permissible. Even here, however, had water not been injudiciously used in the first place, the wax would not have become packed.

Dr. Edward Jackson, of Philadelphia, read a brief communication on the "Diagnosis of Incipient Cataract."

Cataract, though perfectly amenable to treatment, he said, is still one of the most dreaded diseases of the eye. This is mainly because it is blamed for the effects of other lesions. This would be largely avoided if practitioners of medicine were generally more skilful in its diagnosis. Subjective symptoms are of little importance, except as they point to other affections complicating cataract. In this connection, it should always be borne in mind that the uncomplicated advance of cataract is always absolutely painless. The results of examination of the pupil by oblique illumination are often inconclusive or unreliable. The best way to detect partial opacity of the crystalline is to throw into the eye the light from an ophthalmoscope-mirror, and then to look at the general red glare obtained from the back part of the eye. In doing this the surgeon looks through the suspected lens, and all opaque portions become noticeable as black spots, lines, or patches, in the red circle of the pupil. For such an examination no costly ophthalmoscope is needed. Any piece

* Transactions of the Penna. State Medical Society, 1882, p. 189.

of looking-glass, with a hole scraped in the silvering for the observer to look through, suffices perfectly.

But when lens-opacity has been recognized, the diagnosis of cataract is only just begun. The practical question is, Does the lens-opacity cause the symptoms complained of? Incipient cataract might be present and cause no inconvenience whatever. On the other hand, when cataract exists, other lesions of the eye—nerve-atrophy, choroiditis, or ametropia—are very apt to be present. The complete diagnosis of cataract demands ability to recognize all conditions that may impair vision, with the judgment and information necessary to assign to each its proper share in the causation of the patient's symptoms. The best measure of the extent to which lens-opacity interferes with a patient's seeing is the extent to which it interferes with the surgeon's inspection of the optic disk and retinal vessels of the affected eye.

"Some Points in Ophthalmology which may be of Interest to the Physician in General Practice" were considered in the next paper, read by Dr. F. D. Castle, of Philadelphia.

The author, in this paper, called attention to some points in ophthalmology which may be of interest to physicians engaged in general practice. The first is, how to determine whether a case of blindness or defective vision is due to cataract or not, if the appearance of the pupil is such as to warrant the belief that the lens is opaque.

After alluding to the fact that it has not infrequently happened that a case has been diagnosticated as cataract, simply in consequence of a somewhat grayish appearance of the pupil, in which the lens was either not at all or only to a slight extent opaque, and, even in the latter case, not sufficiently so to explain the serious defect of vision existing, the author urged the advisability of one always being sure of the diagnosis in cases in which there seem to be grounds, in the appearance of the pupil, for pronouncing the defective vision to be the result of cataract. If the patient is told that he has cataract, which all the world knows to be curable by operation, and it should turn out that the case was one in which the grayish appearance of the pupil was only deceptive, and the mischief causing the defective vision was seated farther back, in the fundus of the eye, and perhaps of an incurable character, the patient's disappointment would be great and the reputation of the physician who called the case one of cataract would not be benefited. Such mistakes can positively be avoided by a careful examination, and this examination does not necessitate the use of the ophthalmoscope, the skilful use of which will always, in all probability, remain confined to the ophthalmic surgeon for the most part, as the art of using the instrument must first be acquired, and practice is necessary to maintain the skill that has been gained in its employment. In the examination just alluded to, particular attention must be paid to the following three points in every case in which cataract is suspected, where the appearance of the pupil is so slightly opaque as to leave room for doubt. The first of these points is simply a recognition of the fact that in old age the pupil loses often the deep jetty-black hue which it has in early life. A slightly grayish shimmer is, therefore, scarcely to be considered as an abnormality in the pupils of old people. If, in a case of this kind, focal illumination be employed,—*i.e.*, if the rays from a gas-burner in a darkened room be condensed by a strong convex lens in such a way that the apex of the cone of light thus formed falls upon the pupil,—so intense a grayish reflex will stream from the pupil that an uninitiated person might consider the diagnosis of cataract as confirmed, although no centricular opacity whatever exists.

The second point, and a very important one, has reference to the perception of light. The blindness in cataract is never absolute. A person blind from cataract only, the other parts of the eye being healthy and the cataract ripe, should be able to perceive the light of a candle in a darkened room at a distance of twelve feet. The field of vision, as tested by moving a candle round in front of the eye, should also be free. The author adduced a case which had been pronounced cataract, in which the pupil appeared somewhat grayish, but perception of light was absolutely wanting. If the light-perception had been tested in this case, the faulty diagnosis would not have been made.

The third point involved in the examination of the lens has reference to the importance of the image of a flame formed by the posterior capsule of the lens. The author showed how to produce and recognize the image of the cornea and posterior capsule. In the case of a ripe cataract it will be of course impossible to produce the image of the posterior capsule, as the opaque lens-substance in front of the latter will prevent the penetration of the light-rays. In a case of partial cataract the image of the posterior capsule may be visible in some portions of the area of the pupil, but not in this. In case the lens is very slightly but differently clouded, the image of a portion of the capsule may be indistinctly visible, its edges being blurred and ill defined, however, and not as sharp as under normal conditions.

The second point considered in this paper was the probable diagnosis of cases of eye-strain,—*i.e.*, cases in which the symptoms may be relieved by the adaptation of suitable glasses. The author discussed the symptoms which are more or less common to all cases of eye-strain, whether dependent upon hypermetropia, astigmatism, myopia, etc., by paying attention to which the general practitioner will recognize the character of the

trouble at a glance with the same facility as the specialist.

The third and last subject of discussion in the paper was the necessity for the early recognition of acute glaucoma and the avoidance of the use of atropia in any such case. It has occasionally happened that physicians, not at once differentiating acute glaucoma from other inflammatory affections of the eyeball, and acting on the general principle that atropia is of service in many inflammations of the globe, have used this drug as a palliative, when under the circumstances a speedy operation was indicated, and eserine should have been employed if it were thought desirable to use "eye-drops" at all. If the physician is at all doubtful about the diagnosis, he should employ agencies of which he is certain that they cannot by any possibility do any harm until competent assistance is obtained. Warm or cold compresses may be used, as may be most grateful to the patient; leeches to the temple, if the eye is very red and there is great pain, morphine, etc. As mydriatics may excite an attack of glaucoma in an eye which has a predisposition for it, it is evident that they should not be used when the eye has been attacked by the disease.

MISCELLANEOUS BUSINESS.

Dr. P. D. Keyser, of Philadelphia, brought to the notice of the Association the case of a physician of Scranton, who obtained his diploma and registered under peculiar circumstances. Finding a diploma necessary for registration, this man, it was said, had gone to Cleveland, and in two months' time had returned with a diploma, which he had had countersigned by the dean of a Homœopathic College in Philadelphia, the regular colleges having refused to endorse the diploma, as their attention had been drawn to its character by the Lackawanna Society. Action upon this communication was postponed until the next day.

(To be continued.)

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held May 7, 1885, A. Jacobi, M.D., President, in the chair.

THE PHYSICAL EXAMINATION OF WEAK CHESTS, AND THE DIFFERENTIAL DIAGNOSIS OF THE SEVERAL FORMS OF EARLY PHTHISIS.

Dr. E. Darwin Hudson read a paper with this title, in which he briefly referred to the theories regarding the nature of the existing chest-disease which gave rise to certain signs on physical examination, and mentioned the works of Avenbrugger, Laennec, Piorry, Skoda, Allison, Flint, Loomis, Clark, etc. There was reason to believe, he said, not only that pulmonary phthisis presented the three distinct types, catarrhal or bronchial, the fibroid or interstitial, and the tubercular or constitutional, but also that in very many cases it existed in a mixed form. The views which the author presented related to the methods of examination most useful in studying weak chests with tendencies to phthisis, in detecting the times of transition from danger to disease, and in differentiating the early forms of phthisis. They included no new theory as to the disease, but many years' observation in public and private practice.

In addition to the usually recognized essential physical signs of early phthisis, Dr. Hudson thought that many careful students of chest-acoustics had come to the recognition of the differentiation of the forms of fibroid consolidation, whether starting from the bronchi, or centric and diffuse, or distinctly of pleural origin. When over a definite area the percussion-note was pronouncedly flat or high-pitched, with relatively but a slight conduction of the normal sounds, unchanged in pitch and quality, the sounds being feeble and distant, the fibroid was likely to be peripheral, starting from the pleura. When the union of flatness on percussion and obscuration of respiratory and voice sounds was pronounced, especially if bilateral and attended with marked reduction of respiratory motion on both sides, the fibroid was likely to be more generally and diffusely interstitial. When the percussion-note was relatively but slightly raised in pitch, being rather deficient in duration and devoid of pulmonary quality, and there coexisted a general enfeeblement of respiration, the fibroid was likely to have started from the bronchi. The presence of exaggerated tubular quality of inspiratory sound, with slight increase of pitch, of retarded tubular expiration, would further determine whether the case was more especially one of peribronchitis, of bronchial thickening, or of bronchial rigidity and dilatation.

Dr. Hudson insisted upon the importance of examining all parts of the chest. Two areas, almost wholly passed over by most examiners, often afforded most valuable information: they were the high axillary region and the interscapular spaces. The importance of the interscapular space was dwelt upon at some length, and it was shown that while in ordinary positions the space was but small and thickly covered by muscles, yet by crossing the arms, placing the hands on the concavity of the scapulæ, the space was much widened and the intra-thoracic organs were brought in close proximity to the examiner.

The author was convinced that in a large proportion of cases of chest-disease a diagnosis could be made approximately by inspection alone.

In addition to the ordinary features observed during inspection, he indicated three points in particular. The first related to the direction of the clavicle. The upward angle

of the line of the clavicle was as a rule in healthy chests within the range of from ten to fifteen or twenty degrees. When the clavicle was deflected upward and backward at an angle of thirty to forty-five degrees, the chest-development had been manifestly most defective during a long term of years, and the presumption was that the lungs were undeveloped at their apices.

A second point referred to the relation which slight lateral curvatures of the spine bore to the condition of the respiratory organs. Where a certain combination of conditions which he mentioned existed it was reasonable to conclude that the intra-thoracic changes of one side diminished the respiratory action of the overlying muscles, and that an unequal traction on the spine by the antagonizing muscles of the two sides of the back had resulted in the curvature to the side of greater respiratory action and stronger muscles.

A pronounced depression above and below the clavicle, associated with narrow shoulders and marked deviation of the clavicle upward and backward, might exist over feebly-developed apices which were not diseased; but such a depression in a person possessing ordinary breadth of shoulders, and whose clavicles were but slightly deflected upward, was indicative of consolidation at the apex. The sinking in of the infra-clavicular space or of special intercostal spaces synchronous with inspiration, and notably in chests which retained their full expansion, pointed definitely to the existence of a peripheral fibroid of the lung. If the chest-expansion were diminished or suspended, inspiration became diaphragmatic, and here sinking in of the supra-sternal notch, the supra- and infra-clavicular spaces, and of the epigastrium synchronous with inspiration, pointed to a more diffuse and deeper fibroid, shooting from the periphery to the centre of the lung, drawing upon the chest-walls and bronchi.

Dr. Hudson believed that phthisis attacked the apices of the lungs more frequently than other parts for three reasons, namely: First, the apices were so frequently enfeebled by contraction of the upper part of the bony thorax. Second, the apex in this enfeebled condition was soonest reached and most easily invaded by frequent recurring catarrhal inflammations descending from the larynx and trachea. Third, the apices, when invaded by hyperæmia or catarrhal process, were not favorably affected by the energetic force of cough, which was essentially a diaphragmatic act.

Palpation of itself did not afford valuable diagnostic information as to the state of phthisical lungs; it was principally of value as related to fremitus.

Speaking of percussion, the author said that the impression prevailed that it was essentially the exponent of the underlying lung, but its exclusive pulmonary origin could easily be disproved. In contracted chests and in the mixed forms of early phthisis percussion would lead to no positive diagnosis until supplemented by auscultation.

Another physical sign to which the author called attention was the result of mediate percussion, and pertained to the subject of thoracic innervation and the influence of pulmonary tissue-waste upon the spinal centre. He referred to a special cutaneous reflex which characterized many, if not most, phthisical cases. It had first been described by Graves and Stokes in 1830, and called by Lawson Tait "myoidema." Dr. Hudson usually percussed with a quick, firm blow with three finger-tips of the right hand upon the costal cartilages of either side, and in phthisical cases instantly three little conoidal tumefactions appeared, rising to a variable height in different cases and remaining from a second to three seconds. Dr. Hudson was at present disposed to regard this as worthy to be added to the associated signs of pulmonary phthisis. It rarely occurred in any other than phthisical cases.

Speaking of auscultation, the author was not at all sure that the majority of examiners could dissociate vesicular murmur during active respiration on the one hand from the finer tubular friction-sounds, nor, on the other hand, from the susurrus of the thoracic muscles. He had for a long time come to regard the study of the conducted whisper as of equal or greater value than the study of changed vesicular murmur and conducted voice, and of far wider application in determining and differentiating the early stage of the three forms and the mixed cases of phthisis. The patient might utter a quiet, low-pitched whisper, which in quality and volume supplied the place of conducted tubular and vesicular sound, absent in contracted chests; or he might whisper clearly and audibly; or utter a short, abrupt, forcible, high-pitched, aspirated whisper, deficient in volume and duration, but of great intensity, a sound which preserved its characteristics unchanged by slight changes of tissue-density, and capable of transmission through bronchial thickening and fibroid areas when the feebler forms of whisper would be unconducted and unheard. At the apex, the low-pitched whisper changed by transmission through the pulmonary media to a high-pitched sound was diagnostic of incipient infiltration. The non-conduction of such a whisper, or the distant transmission of a high-pitched whisper, when associated with transmission of the voice unchanged in quality and pitch, pointed to peribronchial thickening or centric fibroid of limited extent. The non-conduction of both the low and high-pitched whisper, and a distant feeble conduction of the voice, pointed to a fibroid nearer the surface or progressing inward from a thickened pleura.

Dr. A. L. Loomis, being requested to open the discussion, said he had been very much interested in the paper just read, because the writer had sharply defined the physical signs of early phthisis; and, while he might not agree with all the statements made, in the main he endorsed the positions taken. The first point which had interested him concerned inspection. He thought that those who had examined chests for a long time had come more and more to realize the importance of carefully inspecting the chest before resorting to any other method of physical exploration. It often happened that the appearance of the chest almost compelled a diagnosis of early phthisis. But Dr. Loomis did not regard the slight deformities of the chest so often seen as in themselves of much significance, for out of fifteen hundred healthy chests he had found only ten per cent. entirely symmetrical.

The second point referred to the relative importance of an examination of the different areas of the chest. When he first began the study of physical exploration he received the impression that the infra-clavicular space was of greatest importance in determining the early stage of phthisis, but later on he came to attach more importance to the scapular space described by the author. In many cases it would be found that the disease had far advanced before it gave signs of its existence in the infra-clavicular space. The presence of signs of a peribronchitis in the scapular space was very significant, and for the first six months the signs of phthisis might be limited to this space. With regard to the axillary space, he could endorse what had been said concerning it by the author.

As to vocal fremitus, he had long since ceased to regard it as of great value, certainly of very little value in the early stage of phthisis. But he should lay more stress upon the importance of percussion than the author would seem to do. But it was important to perform percussion aright, and not in a "sledge-hammer" manner.

The whispered voice was to him of far greater importance than the spoken word. It told him more as to the exact condition of the pulmonary tissue, but it especially told him more as to the condition of the pleura. The changes which occurred in the pleura, giving but few physical signs, were often determined very accurately by the whisper.

As to vesicular respiration, it varied so greatly in different persons and in different methods of breathing that one needed to have listened to it very long before he could recognize those very slight changes which some experienced auscultators claimed were present. Dr. Loomis said he could not hear the vesicular murmur which was said to occur after the suspension of the inspiratory act, but he had often heard a muscular friction-sound. He had come to recognize as of importance in the early stage of phthisis three changes in the vesicular murmur,—namely, its softness, its harshness, and its interruption. When in middle life there was loss of the soft breezy character of the vesicular murmur and the presence of a harsh quality, especially if there was also a waviness of the inspiratory murmur, it signified changes in the bronchi and probable commencement of tuberculosis.

Dr. Page spoke of the value of myoidema as a sign of phthisis. He had found it present in nearly or quite all cases of phthisis, and most marked where the disease was advanced and emaciation was considerable. It occurred also most markedly on the side of the chest on which there was the greatest degree of emaciation. He considered it a result of muscular contractility.

Dr. Janeway had given sufficient attention to the sign myoidema to feel convinced that it was a very unreliable sign of phthisis, for the reason that it could be produced over various muscles of the body and was the result of muscular contractility. It was most apparent in emaciated subjects.

In addition to the signs of early phthisis already referred to this evening, Dr. Janeway spoke of the value of percussion at the beginning and end of full inspiration, particularly in the supra-clavicular region. He thought that if there was any sign of value in early phthisis it was the presence of râles in the small bronchi, limited to the supra-clavicular and supra-scapular regions. Subcrepitus in these regions, in cases of cough and loss of flesh, was a valuable sign. Dr. Janeway looked upon the presence of the tubercle-bacilli as an important aid in the diagnosis of the kind of phthisis.

Dr. Hudson, in closing the discussion, expressed the opinion that myoidema was not due to muscular contraction, and said that the elevation of the skin in urticaria, for instance, was not caused by muscular contractility or reflex.

Dr. H. G. Piffard then demonstrated the value of the dentist's foot-bellows in connection with the hand-atomizer and the Paquelin cautery.

PHILADELPHIA ACADEMY OF SURGERY.

At a meeting of the Philadelphia Academy of Surgery, held May 4, 1885, Dr. R. J. Levis, Vice-President, in the chair, a paper was read by Dr. D. Hayes Agnew, entitled

A CASE OF NEPHRORRHAPHY AND NEPHRECTOMY.

J. F. B., æt. 32, married, a native of Pennsylvania, was first admitted to the University Hospital October 31, 1882, with the following history. His occupation was that of a salesman. For some time he had been engaged

as such in a furniture establishment, and at the time enjoyed perfect health. In the fall of 1878, while assisting in lifting a heavy piece of furniture, he experienced a sharp pain deeply seated in the lumbar region and accompanied by the sensation of something having given way. The suffering was sufficiently severe to compel him to discontinue work. From that moment he dates his present illness. The most prominent symptom in his case was a dragging pain in right lumbar region, shooting down in the direction of the corresponding iliac fossa. This pain was paroxysmal and always aggravated by any unusual effort. Dimness of vision was also complained of. Nothing abnormal was discovered in the eye-ground.

On examination, a tumor was found on the right side of the abdomen, extending into the umbilical region, quite movable, and having the conformation of the kidney. This tumor, which could usually be readily felt, would sometimes disappear, requiring for its reappearance the manipulations of the patient himself. At the time of his admission into the hospital a notable quantity of albumen was present in the urine, which varied in amount from day to day. At no time were any casts discovered in this secretion.

The diagnosis was floating kidney, and after trying the various mechanical devices employed for similar conditions without success, the patient left the hospital. On October 3, 1884, he returned to the institution, at which time he came under my care. The pain was so severe and continuous that he had been compelled to use morphia almost daily, in considerable doses. He was entirely disabled for work, and even walking a very short distance was attended with distress. At this time the urine was examined a number of times, with negative results.

The treatment advised was nephrorrhaphy, and on October 10 the patient was placed upon the table, etherized, and the operation performed. A linear incision four inches long was made along the outer edge of and parallel with the course of the erector spinæ muscles. After dividing the different strata of tissues,—cutaneous, fascial, muscular, and aponeurotic,—the renal fat was reached and broken up, the kidney thrust back into its bed by pressure over the abdomen, and then secured in position by sutures of catgut passed through the capsule of the organ and the edges of the wound. The peritoneal fat was also stitched to the sides of the incision in the soft parts. A drainage-tube was next introduced and the sides of the wound slightly approximated by two sutures, one near to the upper and the other to the lower angle, after which the parts were dressed with the aseptic gauze, MacIntosh salicylated cotton, and binder. The entire operation was conducted under strict antiseptic precautions.

After the first twenty-four hours his temperature became normal, and during the entire period of his convalescence nothing unusual occurred. He was discharged November 15, 1884, and returned home. For something over a month he remained well, but on making some exertion was again seized with the old pain, followed by the same disability.

April 21, 1885, the patient re-entered the hospital, and on the 23d of the same month I removed the kidney by the lumbar incision. The operation consisted in making two incisions: the first one inch below and parallel with the last rib, and five inches in length; the second parallel with the external border of the erector spinæ muscles, and extending from the first incision almost to the crest of the ilium. On reaching the renal adipose tissue the latter was again torn, the kidney drawn into the wound and enucleated from its surrounding connection by the fingers and forceps. The ureter was next exposed and tied with two ligatures. A double ligature was next passed around the renal vessels and tied, after which both ureter and vessels were divided between the threads and the organ removed. The threads used for the ureter and renal vessels were silk which had been previously rendered aseptic by boiling in carbolized water. Only two or three vessels belonging to the external parts required to be tied, the ligatures being catgut. A large drainage-tube was next carried to the bottom of the wound, and the latter closed by silver sutures. The operation, dressing, and after-treatment were all made under strict aseptic precautions.

The patient made a rapid recovery without a single untoward symptom, and was discharged May 21, 1885, four weeks from the date of operation. The urine, which for the first two or three days amounted to twenty-four ounces, gradually rose in quantity until at the expiration of ten days forty ounces were passed.

DISCUSSION.

Dr. Levis asked what was the material of the ligatures.

Dr. Agnew replied that they were silk ligatures boiled in carbolated water and kept in carbolized oil. The ureter and vessels were ligatured separately. The chief difficulty is experienced in enucleating the kidney; the walls of the vessels are very thin.

"I can readily see how the operation might be done in one-half the time by passing a strong ligature around the kidney before commencing to enucleate, and pushing this before the fingers as the attachments of the organ are broken up. Then, if any accident happens, the ligature could be slipped below the bleeding point and quickly tightened."

Dr. S. W. Gross said, "I take it, Mr. President, that under no circumstances should any operation be resorted to for a wandering kidney until after the failure of mechanical appliances to fix the organ in position. Even

in the event of failure, which is highly probable, surgical interference is not justifiable unless the patient is unable to bear up against suffering, since we have to deal with a kidney the structure of which is normal, and which, therefore, is performing its functions.

"Stitching the capsule of the kidney to the margins of a lumbar wound should always be practised before resorting to the harsher remedy, nephrectomy. Of 17 nephrorraphies which I have collated, 1, or 5.88 per cent., died; the operation utterly failed to fix the kidney in 4 of the survivors; and the success was only partial in 3. Hence, although it has not afforded relief in one-half the cases, its comparative freedom from danger makes it preferable to nephrectomy.

"Extirpation of a painful floating kidney has been done 22 times, with 13 recoveries and 9 deaths, or a mortality of 40.90 per cent. Of 19 abdominal operations, 11 were cured, and 8, or 42.10 per cent., perished; while of 3 lumbar operations 2 recovered, and 1, or 33.33 per cent., died. As the kidney can be made to protrude through an incision in the loin in the majority of instances, the lumbar operation is the preferable one; although if there should happen to be a long mesonephron the ventral operation would be easier and attended with comparatively little risk. The dangers of the latter operation, indeed, are only marked when the kidney moves beneath the peritoneum. In estimating the risks it must, however, be borne in mind that peritonitis was the cause of one-half of the deaths, so that by selecting the lumbar incision that danger is almost entirely avoided.

"I say that it is almost entirely avoided, because the lumbar incision does not entirely protect against the danger of peritonitis. I have examined the records of a large number of nephrectomies, and I find that the pleura has been opened in one, and that in six cases the peritoneum has been opened. Once the colon was torn, and there was fæcal effusion into the peritoneal cavity.

"As regards the incision, I think from my knowledge of the subject that I may say, with Prof. Agnew, that the ordinary linear incision, such as made in performing nephrotomy, is not the incision to be advised for extraction. Many operators make an oblique incision from the border of the erector spinæ muscles, commencing on a line with the lower border of the twelfth rib, and carry the incision obliquely forward to the crest of the ilium. Other operators have employed the same incision as Dr. Agnew has described."

Dr. Agnew remarked, "It is proper to say, in this connection, that all the ordinary appliances had been employed with the view of fixing the kidney, but they had all failed; also that the operation was done under strict aseptic precautions. After the first operation the divided aponeurosis never filled up with connective tissue, and I think it doubtful if it ever does. This probably leaves the patient liable to hernia of the colon."

Dr. Levis: "I would ask Dr. Gross what other inconveniences are connected with floating kidney beside the pain. Are there any dangers to life?"

Dr. Gross: "There are no dangers to life from floating kidney. The only trouble is the intense suffering, which interferes with the patient's occupation. The history of Dr. Agnew's case is as good a one as could be had of floating kidney.

"In regard to mechanical appliances, it has been found that they are really of little value. All sorts of compresses and pads have been employed, but there are few cases in which they have been of the slightest value. It was on this account that Hann introduced nephrorrhaphy."

Dr. Levis: "About ten days ago, at the Jefferson College Hospital, I reached the kidney in an unintentional manner. A child was brought to the hospital who for a long time had presented symptoms which appeared to me and to other surgeons to indicate perinephritic abscess. The child was ten years old, and the thigh drawn up on the pelvis. Exacerbations of fever occurred every day, the temperature at intervals going up to 102°. Percussion seemed to outline a cavity filled with fluid, and there appeared to be fluctuation.

"I made the oblique incision described by Dr. Gross. The farther I cut down, however, the less distinct appeared to be the sense of fluctuation. At last I reached a large kidney which I believed to be sarcomatous. I could hardly resist the temptation to remove it. I was deterred from operating partly because of the fact that I had not obtained the consent of the child's parents and partly on account of the remarks made by Dr. Gross at Washington in regard to nephrectomy in children.

"Since the operation the child has had no pain, and the thigh can now be straightened, and I believe that I have done a nerve-stretching all around the kidney. As I say, there have been no pain and no exacerbations of fever since the operation."

Dr. Gross: "I think that it is quite possible that in this particular case the benefit was due to the relief of tension from the division of the tissues overlying the kidney. There are cases on record by Anandale, Lucas, and Morris, in which the operator cut down on the kidney with the expectation of finding a calculus, but after manipulating the kidney no stone was found. In all these cases there had been a great deal of pain before the operation, but in many of them there was absolute relief either from removal of tension or from something done to the nerves, possibly nerve-stretching, as has been suggested. Weeks, in a paper published about 1883, says that a mere incision

of the loins over the kidney will probably suffice to fix the kidney by the granulations which spring up. I think, however, that this is merely an idea, for if after stitching the kidney to the external tissues the organ will slip back in one-half the cases, we should not expect a simple incision to fix it.

"In certain operations on the abdominal cavity, as in cyst of the pancreas, cholecystotomy, and abscess of the liver, some operators have made an incision down to the peritoneum and introduced into the wound some foreign material, as antiseptic lint, so as to create adhesions between the wall of the cyst and the wall of the abdomen, and thus prevent effusion into the cavity of the peritoneum when the cyst was opened. Although the operation for floating kidney is somewhat different from this, yet I believe that if, after the lumbar incision had been made and the kidney sutured to the edges of the incision, it were possible by adapting some apparatus in front to make gentle compression on the kidney and keep it in the wound, and to lay in the bottom of the wound a foreign material to excite more rapid inflammation, we thus might fix the kidney. This seems feasible."

Dr. J. William White observed that in this case in the first operation the wound was left open to favor granulation, and a large pad was placed in front to carry the kidney backward.

Dr. Levis asked Dr. Agnew if it would add to the risks of the operation to transfix the tissue of the kidney itself in order to obtain a firmer hold.

Dr. Agnew said, "It is not possible to say what might be the effect; but where stones have been taken out of the kidney there seems to have been no difficulty in scratching through the kidney-structure sufficiently to remove the stone. I think that if I should do nephrorrhaphy again I should break up all the connections of the kidney and turn it into the wound, and stitch the fatty and connective tissues to the margin of the wound. I think that this would not endanger life more than the ordinary operation."

Dr. White stated that at the operation Dr. Agnew had on the table an ovariotomist's clamp. The idea of encircling the pedicle with a ligature did not occur to him until after the operation. The delay in the operation was from the danger of tearing through the vessels, especially the renal vein, which would be a serious complication.

The operation is really a very simple one. The difficulty in this case—and the same was found in performing the operation on the cadaver—was in finding the ureter and in isolating and ligating the vessels. There is no trouble in finding the kidney, and there seemed to be little difficulty in avoiding the colon.

Dr. Levis inquired, "What about the propriety of ligaturing the pedicle *en masse?*"

Dr. White: "It seems to me that it might increase the danger of secondary hemorrhage from separation of the ligature too quickly. There would probably be other objections in connection with ligature of the ureter."

Dr. Levis: "In the case to which I have referred, while contemplating the propriety of extirpation, it occurred to me to take the serrated bone-forceps and grasp the pedicle, and make it secure, and thus guard against the risk of hemorrhage. I cannot see any objection to tying the pedicle *en masse*."

Dr. Gross: "It has been done repeatedly. I may say that, apart from the removal of tumors, there has been no hemorrhage. There is only one case on record, a case of pyonephrosis, in which the patient perished from primary hemorrhage. In other cases hemorrhage has occurred in the removal of sarcomatous and carcinomatous tumors. In one case the vena cava was opened, but the bleeding was controlled by pressure. In another case (Cheyne) the abdominal aorta was torn. It was tied; but the patient of course died."

Dr. J. Ewing Mears: "In the cases of nephrorrhaphy which have been reported as successes, has Dr. Gross any information as to the time after operation at which the cases were reported?"

Dr. Gross: "They have been reported long enough after operation to show the result."

Dr. Mears: "The history of these cases seems to indicate that this operation is almost useless, and that nephrectomy is the operation which should be performed. There is great difficulty in obtaining a secure hold on the kidney and retaining it in position until adhesions have formed. Then these adhesions may not be strong enough to resist the power exerted by the muscles. Considering these things, I believe the proper operation would be to remove the kidney at once. The operation for fastening the kidney in position is probably not so grave, although, so far as the separation of tissue is concerned, it is nearly if not quite as extensive. It would require some time to decide whether or not the adhesions which had formed after the operation were sufficient to hold the kidney in position."

SUBSTITUTE FOR TRACHEOTOMY TUBE.

Dr. Packard presented for examination a device as a substitute for the tube after tracheotomy. He also exhibited a safety-pin removed by tracheotomy from the larynx of a child five years of age, illustrating a difficulty in diagnosis.

He also presented a specimen of a foreign body removed from the bladder, with the following history. A girl was brought to St. Joseph's Hospital with the history of having passed calculous formations from the urethra. This was the only history that he could ob-

tain. It was clear from a simple exploration with a short sound that the foreign body could not be removed without dilatation of the urethra. This was done, and with the forceps he removed this hair-pin bent in this peculiar shape. A number of calculous formations came after it. The girl recovered, and left the hospital without explaining how she had managed to get the hair-pin in that shape into the bladder.

REVIEWS AND BOOK NOTICES.

HARVEIAN LECTURES ON THE MODE OF DEATH FROM ACUTE INTESTINAL STRANGULATION AND FROM CHRONIC INTESTINAL OBSTRUCTION. Delivered before the Harveian Society of London. By THOMAS BRYANT, F.R.C.S.

This valuable monograph by the senior surgeon of Guy's Hospital is based on a study of fifty-nine cases, the clinical records of which are given in full.

From his great experience, his acknowledged position, and the careful study he has evidently given the subject, his conclusions are worthy of the utmost consideration.

He objects to cases of strangulation being placed among those of obstruction, as the obstruction in cases of strangulation is only one of the symptoms and not the cause of danger nor of death. The danger is from changes in the bowel itself.

After describing the pathology and symptoms of internal strangulation, he says,—

"What bearing, then, should these facts have upon surgical practice? Are they such as to lead the practitioner to depend upon a surgery of hope, based upon the administration of drugs which mask symptoms, but do nothing towards the relief of the mechanical conditions upon which the symptoms depend? Or should they lead him to look boldly at each case as it presents itself, and to act decidedly and with precision? In a case of strangulated hernia, the rule is now well recognized that on the appearance of vomiting—from the first occurrence of which symptom the date of strangulation is calculated—no time should be lost in the reduction of the hernia, either by taxis or herniotomy; for surgeons and pathologists well know that nothing less than the mechanical relief of the mechanical condition which is called strangulation in a hernia can be of essential service, and that, until this end be secured, opium only masks symptoms and brings about a fool's paradise, where the surgery of hope may exercise itself at the expense of scientific knowledge and patients' lives.

"In a case of internal hernia, or of internal strangulation, from whatever cause,—conditions ushered in by the same series of symptoms as indicate an external hernia, though without an external swelling,—surely the same sound principles of surgery are equally applicable; and it behooves the surgeon, in the one case as in the other, to relieve the mechanical condition which is called strangulation by the only means by which relief can be afforded, and that is by operation."

After giving a large number of cases, with their histories in full, he concludes with the following rules of practice:

1. Laparotomy should be undertaken as soon as the diagnosis of acute intestinal strangulation is made. There should be no delay allowed for the formation of a specific diagnosis of its cause. It should likewise be proposed in all cases of acute intussusception, and even of chronic, which have failed within three or, at the most, four days, to be relieved by other treatment.

2. In all operations of laparotomy it is to the cæcum that the surgeon should first advance, since it is from it he will obtain his best guide. If this be distended, he will at once know that the cause of obstruction is below; if it be found collapsed, or not tense, the obstruction must be above. Adhesions or bands are, moreover, more frequently near to or associated with the cæcum than with any other part of the intestinal tract. It is also in the right iliac fossa that the collapsed small intestine is found; and with this as a starting-point, the surgeon will have less difficulty in tracing up the intestine to the seat of strangulation than if he begins at a distended coil, when it will be a matter of chance whether he travels away from or towards the special object of his search, the seat of obstruction.

3. In a laparotomy, when the strangulated coil of bowel is gangrenous it should be brought out of the wound and the gangrenous knuckle resected. The proximal and distal ends of the resected bowel should then be stitched to the edges of the wound and an artificial anus established.

4. Nélaton's operation of enterotomy should be undertaken when laparotomy is rejected.

In the lecture on the differential diagnosis he states, "A sudden attack of abdominal pain, accompanied with vomiting, attacking a patient previously in good health, the two symptoms being more or less paroxysmal and associated with obstruction, mark its nature; and they do, whether or not they are complicated with an external hernial swelling. When the latter condition obtains, a strangulated hernia is readily diagnosed; when no such swelling is present to make the special diagnosis sure, the symptoms are still enough to indicate the existence of some internal strangulation, although its special form may be obscure." J. M. B.

"SNIDE PLATINUM" was named as the cause of death by a coroner's jury in this city in the case of a child who died after drinking hair-dye presumably containing cyanide of potassium.

MISCELLANY.

POWERS OF A BOARD OF HEALTH.—An important decision to sanitary authorities has recently been given in New Jersey by the State Court of Errors and Appeals. The case was that of the American Hotel at Trenton, which claimed the right to construct a private sewer discharging into a small stream running through the city, after being refused permission by the Board of Health. The hotel claimed that the authority to construct the sewer was confirmed by the Councils of the city, and furthermore contended that the Board had no right to interfere, because the law under which it was organized was unconstitutional.

The decision was against the hotel company, on the following points: 1. The City Councils had no power to license an individual to lay a private sewer in public streets, or to discharge filth into an open water-course not a public sewer. 2. The action of the Board of Health in proceeding in equity for an injunction was not in excess of its powers. The court took the broad ground that "no business is so necessary as to justify those conducting it in creating a nuisance in the thickly-settled parts of a city. If a hotel cannot dispose of its necessarily accumulating filth without creating a nuisance, and happens to be erected in a populous city which will not or cannot provide sewers or other facilities for disposing of such filth without injury, it is plain that its business must cease in that locality until it can be conducted with due regard to public safety and comfort."—*Sanitary Engineer.*

PREPARED MALT AS FOOD FOR INFANTS AND INVALIDS.—An analysis by Mr. G. W. Wigner, the President of the Society of Public Analysts of England, throws considerable light not only on the composition, but also on the physiological action of the preparation known as Mellin's Food. It appears that it contains nearly eighty-seven per cent. of dextrine, maltose, etc., soluble in cold water.

"As Mr. Wigner points out, it is not a mere starch or sugar food, but a soluble preparation containing those nitrogenous and phosphatic materials which contribute largely to the growth of bone and tissue in young children. Being thoroughly malted, it is not only readily digestible itself, but actually assists in the digestion of milk and other foods with which it is mixed. It must of necessity be of great value in the case of feeble infants who cannot digest ordinary starchy foods. Mr. Wigner's analysis has evidently been performed with great care, and is of much interest."—*British Medical Journal*, May 3, 1885.

PUERPERAL PEPTONURIA.—During the postpartum period of uterine involution, and before fatty degeneration of the uterus occurs, Fischel finds peptone in the urine, which is found also in the lochia; but the former does not proceed from the latter. From experiments in a number of cases he concludes that the peptonuria was derived from the muscular substance of the uterus, and that its presence during life is securely established. It is not to be found during rest in the unimpregnated uterus, nor long after the uterus has evacuated its contents; it does not occur after the full establishment of fatty degeneration. Analyses of the urine of pregnant women were also made, but without a definite result.—*Manchester Med. Chronicle.*

DR. B. F. BAER, President of the Philadelphia Obstetrical Society, and late Demonstrator of Diseases of Women in the University of Pennsylvania, has been elected Professor of Diseases of Women and Children in the Philadelphia Polyclinic and College for Graduates in Medicine.

DR. H. AUGUSTUS WILSON, having returned from his studies abroad, has been elected Professor of Fractures and Dislocations in the Philadelphia Polyclinic and College for Graduates in Medicine, and Secretary of the Faculty.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 24, 1885, TO JUNE 6, 1885.

MAJOR ALBERT HARTSUFF, SURGEON.—Ordered from Department of Missouri to Department of the East.

MAJOR H. E. BROWN, SURGEON.—Ordered from Department of the East to Department of Missouri. S. O. 121, A. G. O., May 27, 1885.

MAJOR S. M. HORTON, SURGEON.—Ordered for duty as post-surgeon, Fort Riley, Kansas.

MAJOR P. J. A. CLEARY, SURGEON.—Ordered for duty as post-surgeon, Fort Lyon, Colorado. S. O. 78, Department of Missouri, June 1, 1885.

MAJOR J. M. BROWN, SURGEON.—Assigned to duty as post-surgeon at Fort Omaha, Nebraska.

CAPTAIN LOUIS BRECHEMIN, ASSISTANT-SURGEON.—Relieved from duty at Fort Omaha, Nebraska, and assigned to duty as post-surgeon at Fort D. A. Russell, Wyoming. S. O. 49, Department of the Platte, May 29, 1885.

CAPTAIN CALVIN DE WITT, ASSISTANT-SURGEON.—Ordered for duty at Newport Barracks, Kentucky. S. O. 107, Department of the East, May 22, 1885.

CAPTAIN F. C. AINSWORTH, ASSISTANT-SURGEON (Department of Texas).—Ordered for temporary duty in Department of Missouri. S. O. 58, Department of Texas, May 25, 1885.

CAPTAIN WILLIAM R. HALL, ASSISTANT-SURGEON (David's Island, New York Harbor).—Ordered for temporary duty at Willett's Point, New York, during absence of post-surgeon. S. O. 121, A. G. O., May 27, 1885.

CAPTAIN JOS. Y. PORTER, ASSISTANT-SURGEON.—Granted leave of absence for six months, on account of disability. S. O. 126, A. G. O., June 3, 1885.

CAPTAIN WILLIAM G. SPENCER, ASSISTANT-SURGEON.—Ordered for duty at Fort Sisseton, Dakota Territory. S. O. 55, Department of Dakota, May 20, 1885.

CAPTAIN WM. B. DAVIS, ASSISTANT-SURGEON.—Granted leave of absence for one month from May 25, 1885. S. O. 122, A. G. O., May 28, 1885.

FIRST-LIEUTENANT R. L. ROBERTSON, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 123, A. G. O., May 29, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JUNE 27, 1885.

ORIGINAL LECTURES.

THE DRAINAGE QUESTION IN PHILADELPHIA.*

BY GEORGE E. WARING, JR., M. INST. C.E.,
Newport, Rhode Island.

NOTHING is so dear to the heart of the patriotic citizen as the conviction that his own town has a smaller death-rate than other towns have. The patriotic citizen of Philadelphia, if we can trust the statistics, has, in this regard, ground for great contentment.

Measured by the statistical scale, Philadelphia stands on this score almost, if not quite, at the head of the list of the larger cities of the world. While no one, I am sure, would wish the death-rate of this city increased, all thoughtful persons who consider the subject must wish that, in some other way, such a stimulating action as a high death-rate produces might exert its influence among your people, and, through them, upon your rulers.

There are several very good reasons why the death-rate in Philadelphia should be a low one.

Much of the more closely built portion of the city is on a soil that is naturally well drained, so that the deteriorating influences of excessive soil-moisture are not active here; but far more important than that is the fact that, with rare exceptions, there is nowhere in Philadelphia anything approaching to overcrowding. Slums hardly exist to such an extent as to affect the average health of the whole city. Certainly in no other city in Christendom does anything like so large a proportion of the population live by day, and sleep by night, in rooms opening directly to the outer air.

Could these most favorable conditions be preserved, and could everything relating to water-supply and to the removal of waste matters be reformed in accordance with the best modern light on the subject, I believe that the death-rate would be, not eighteen or twenty per thousand, as it is now, but not more than eleven or twelve per thousand. In other words, I believe that if the sanitary conditions of Philadelphia were made in all respects as good as they might be made, the avoidance of preventable deaths would amount to about twenty per day. In the presence of such appalling and constant sacrifice of human life as these figures indicate, it would seem hardly necessary to add anything further in the way of argument; but it should not be forgotten that every death, from the class of diseases especially involved, means, on an average, twenty cases of sickness, and not less than four hundred days of suffering and loss of productive time on the part of the patient and the attendant;—not less, on the average, than one hundred dollars of actual outlay, and, over and above all this, such an amount of anguish, disheartening, and demoralization as greatly to lower the effective value of the whole community.

If these figures are to be trusted, though we disregard, as being too familiar to move us, the 7000 unnecessary annual deaths and the 140,000 cases of preventable sickness and about 3,000,000 days of lost time, it is still worth while to consider, as being a more practical question, that the actual expenditure of money occasioned by all these deaths and by all this sickness is not less than $700,000 per annum, being the annual interest, at seven per cent., of $10,000,000,—a sum which, great though Philadelphia is, and difficult though its problems, would go a very long way toward giving its people clean water to drink, dry air to live in, and pure air to breathe.

What concerns us this evening is the supplying to this town of *pure air to breathe*. That, with dry air to live in, where the contamination of the water-supply is not in question, is the final outcome of the whole business of sanitary drainage. This may seem to the common mind, accustomed from childhood to foul streets, stinking outhouses, and close and stuffy dwellings, a very fanciful object to be sought with so much clamor and to be attained only at the end of such great expenditure; but it is a fact, nevertheless, that sewerage and house-drainage, in so far as they relate to the removal of organic matter, seek only to establish a constant condition of purity in the atmosphere in which we live, in-doors and out of doors.

* A Public Lecture delivered June 12, at the Hall of the College of Physicians of Philadelphia, by invitation of the Committee on Hygiene of the County Medical Society.

In working towards this cherished result, all communities, especially all large communities, are very apt to begin their operations at the wrong end. London, Boston, and Buffalo are conspicuous examples of this. In London millions of pounds have been spent on great intercepting sewers and outlet works, more or less effective,—rather less than more, as the issue already shows. The whole question of interior drainage, the drainage of houses as well as of streets, has been left to the haphazard and ignorant control of the church vestries, which are in such matters the only local authority governing and protecting the interests of the aggregated communities of which London is made up. However completely the great works of the Metropolitan Commission may have fulfilled the expectations of their designers, the local sewerage, and in a great degree the house-drainage, of the whole of London is shamefully and dangerously bad.

Boston, as a preparation for future improvements, and to get rid of the bad smell on its shores and of the dirty look of its harbor, has spent, *without materially affecting its sanitary condition*, an amount of money which, judiciously applied, might have reduced the death-rate by at least five in a thousand. That is to say, it might have saved nearly two thousand unnecessary deaths every year, obviating at the same time the loss and suffering that these deaths imply.

Buffalo, too, with the gravest need for an improvement of its local drainage, for the reformation of work which has grown up as best it might with a rapidly-growing town, a town too busy in money-making to pay much attention to the way in which its drains were laid, and where the execution of public work has by no means always been guided by good judgment and rigid virtue, — Buffalo is now spending about a million dollars to purify a branch of the Erie Canal which runs more than a mile up into its manufacturing and railroad quarter. I am connected with the building of this sewer myself, and the money that it will have cost is being most carefully and honestly disbursed by a good and faithful Commission. It will purify the canal, and it will furnish for all time a perfect outlet for all of the foul wash of the city. At the same time I think, and I have always maintained, that *as a sanitary improvement* its building *at this time* is an injudicious expenditure of money.

There is something about fine engineering works which appeals to the heart not only of the engineer who designs it, but of the councilman who votes for it and of the citizen who is taxed for it.

The money paid for this Buffalo sewer —and the same may be said of the works in Boston and in London—has been paid without a murmur. Had it been proposed to spend a like amount on a reformation of the local drainage of either city, there would have been no hope of carrying the project through, for reasons obvious to those who have tried the experiment with the average City Council, and who know the influences under which public money is too often appropriated.

Some years ago, in a discussion about a modest sanitary improvement in this city, one who knew much of the corrupt ways of that time—now happily passed—said that the only possible way of getting anything done would be to get up a grand and comprehensive scheme in which five million dollars would be honestly spent and through which five millions might be safely stolen. I must say, however, that, with a considerable experience in dealing with city governments, it has seemed to me that if these large sums were being abstracted by those who control the government, their means for concealing their peculations were very complete. I have generally been led to ascribe the almost universal indifference of City Councils to all questions of drainage not to cupidity, but rather to stupidity,—that stupidity which prevents our fellow-man from seeing things as they appear to us.

To take up now the question of the proper drainage of Philadelphia, let us consider the actual conditions to be met.

Nearly the whole of the old city, and a large portion of the present business quarter outside of the old limits, lie from twenty to forty feet above tide-water, an elevation ample for good drainage. The rise and fall of the tide in the rivers is over six feet. Formerly there were numerous small streams rising and running for their whole course within the present city limits. The country north of the city is drained by natural watercourses of its own.

The small watercourses referred to have been converted into brick sewers. In the newer parts of the city there are several

streams of considerable volume, and their proper treatment is a very important element of the engineering problem now demanding attention. In some of that territory there existed already sewers, which were almost always bad in design and in construction.

A conspicuous peculiarity of the sewerage-work thus far done in this city is its great uniformity. If we except very large main sewers, occupying the courses of ancient streams, nearly all of the sewers are built now precisely as they were built forty years ago. They are almost always round, and are almost always three feet in diameter, rarely two feet six inches. They are built with a single four-inch ring of brick, the lower half of which is generally laid without mortar directly upon the earth excavated to receive it. The upper half is laid with mortar, and is built over supporting "centres" of true form.

The means of connecting house drains is a sort of "go as you please." There is no effective control on the part of the city officials over the sizes of pipes, the depth or grade to which they shall be laid, or the manner of connecting them with the brick-work.

My assistant, Mr. Baldwin, who made for me an examination of some of the Philadelphia sewers a few years ago, describes the free-and-easy way of making these connections. He says, "The customary manner of making connection with a sewer is to knock a hole in it with a bar or hammer, and, after placing the connecting-pipe, to put a few loose bricks above the broken place and fill up with earth. These loose bricks are soon displaced by rats, the earth caves, and the sewer itself sometimes falls in."

This work is constantly causing serious obstructions and sometimes actual stoppages of the sewers. The lower half of the sewer being laid without cement, so much of the liquid part of the sewage as the soil is able to receive is freely transmitted to it. Water is carried in street-gutters for certain distances, and then, with the interposition of that most offensive of all of the engineer's devices, the ordinary "inlet-basin," is let into the sewer, carrying with it so much of its sand and rubbish and filth as is able to pass the trap of the inlet. The rest remains in the basin, to putrefy before the eyes and under the noses of the people.

The sewers are, in nearly all cases, so large, as compared with the surfaces that they have to drain, that their stream is never able to wash them clean, so that deposits are frequent and often considerable, —deposits not of mere dirt as we see it in the street, or of mere refuse as we see it in the gutters, but stagnant and putrid, as such matters are sure to become under such circumstances.

Concerning the removal of the deposits retained by the inlet-basins themselves Mr. Baldwin says, "This is done by removing the cast-iron covers and shovelling up the deposit into the street, where it is left to drain until it is carried away by the street-cleaning contractor or scattered by the wheels of passing carriages."

In many parts of the city the deposits are enriched with the household slops, from kitchen, laundry, and chamber, which are thrown into the street-gutters. This flow, not dangerous but certainly unattractive so long as it runs in the gutters, under the open sky, becomes a source of added danger when mingled with the other foul deposits of the basin and of the sewer. The practice of sending house-slops into street-gutters is so common that there are few streets in the city which are free from such abuse, and nearly all of the inlet-basins are thus converted into cesspools filled with indescribable filth. From the markets and from the fish- and fruit-stands other objectionable wastes are contributed to the mass.

The sewers are provided with man-holes at intervals. These are rarely opened, and they are not useful for ventilation. Mr. Baldwin says, "The sewers are, therefore, practically without any ventilation, and on raising one of these covers the rush of vapor, gas, and sometimes of steam is so great that some time must pass before one can look down into the sewer and see anything. Within the past few years some grated covers have been used for new sewers, but no attempt has been made to substitute them in the old ones. In fact, most of the old sewers are so offensive that it is doubtful if perforated covers could be used without creating a nuisance for some time.

"The accumulation of gas in the branch sewers of Philadelphia is rendered unavoidable by their shape and size, and by the lack of ventilation. A sewer circular in section, with a diameter of three feet, cannot be kept clean until the flow of

water becomes several inches deep. So much kitchen and laundry water is turned out on the surface of the ground and exposed to the air in the street-gutters and basins that the supply for washing out the gutters is greatly reduced by evaporation, while the deposit gradually accumulating in the branch sewers retards the flow, and by its decay is constantly contributing to the supply of sewer-gas."

Let me call to your attention the fact that I am not describing sewers in New York, or in Boston, or in some old Continental town, but that I am describing the conditions which actually exist at this moment here in your own city of Philadelphia,—probably on all four sides of the block on which we now stand, and substantially on all four sides of all the blocks in the most valuable and most fashionable part of the town.

These sewers, far from receiving waste matters produced in houses and industrial establishments in a fresh condition, and conveying them rapidly and completely to their outlets in the rivers, receive much that is putrid when it reaches them, and they foster and continue the putrefaction in their foul interiors, so that their outflow is as offensive as bad arrangement and ignorance and neglect can make them.

This outflow from a population of a million people is delivered into the rivers in a poisonously foul condition. The tidal movement in the Schuylkill is much less active than that of the Delaware, and the condition of its water is obviously more foul. Along the Delaware there are long and solid piers enclosing slips which are only indirectly influenced by the tidal movement, and which contain deposits of putrescible matters. The tide sets up the river about four hours and three-quarters, and down the river about seven hours and a half during each rise and fall, with considerable variation of these periods according as the upper Delaware is running full or slack.

The condition of both rivers, produced by the great quantity of sewage delivered into them, it will be easy for you to examine for yourselves. It is a condition which grows worse as the population increases, and it must sooner or later become intolerable.

So much for the drainage of your streets. Let us now consider the drainage of your houses, remembering the sound sanitary maxim that "the house is the unit of sanitary administration."

House-drainage here may be roughly classed under two categories. First, that still prevalent in very many of the best houses in the fashionable parts of the town; and, second, that adopted in connection with the smaller houses in the newer quarters.

In the first category are houses provided with cesspools, sometimes in their yards and sometimes in their cellars. The local name given to these cesspools is "wells." This indicates very largely their origin. Wells originally supplying good water, but made useless for that purpose by the proximity of shallow cesspools, and also made unnecessary by the introduction of Schuylkill water, have been turned into receptacles for the liquid drainage of the houses. Having been excavated far into the water-bearing strata underlying the city, they serve for a long time, until the gravel becomes clogged, as a means for the discharge of foul liquids. Mr. Baldwin says, on this subject, "The experience thus gained has induced many householders to excavate cesspools deep below the water-bearing surface, so that in many parts of Philadelphia these cesspools—now almost universally called wells—extend to a depth of twenty or thirty feet, and even sometimes many more feet below the surface of the ground. Originally these wells are located in some out-of-the-way part of the lot, in the rear of the dwelling, but as the city grows, and new houses are built and streets opened, it is more likely than not that the rears of large building-plots become the fronts of smaller lots, facing on a new street laid out between two old ones. Some of the squares of the original city of Philadelphia have two or three intermediate streets laid out through them. These old wells, dug for drainage purposes, are so deep as to be far below the level of the cellar-bottoms of adjacent houses. It would be very uncharitable and probably untrue to say that wells are ever dug within the walls of a dwelling-house, but it is true that a house is sometimes built over an old well, and, instead of its being cleaned out and filled in, it is still used to receive the drainage of the new house. The locations of the pipes leading into the well from the old houses, too, are forgotten, and, unless they happen to be uncovered and cut off in digging for the foundation of the new

one, the underground-drainage of an area once forming a plot of considerable size, owned and occupied by a single family, is now so complicated and forgotten that nobody knows or cares anything about it. Such old, forgotten house-drains are frequently found in rebuilding old houses, and in extending the foundation to a greater depth than before. The earth beneath and around them is usually discolored for a distance of several feet in all directions from the drain. An instance of this kind was observed in the excavation for the foundation of a house being rebuilt on Market Street, below Eleventh, where an old drain was cut off, exposing a considerable extent of black- and green-colored clay beneath the level of the old foundation. In excavating for the foundation of an extension of a dwelling on Twelfth Street, not far from Vine, two old wells were uncovered directly in the line of the foundation walls, and only twelve to fifteen feet apart. As they were filled with a black, soft, oozy matter, and were apparently bottomless, the usual practice common among builders was resorted to,—viz., to turn an arch over the well to sustain the wall of the house above it, and let it remain, disturbing its contents as little as possible on account of the sickening stench given out when moved. An example of a well entirely within the walls of a house, and still used to receive its drainage, was observed not long since in the cellar of a house on Race Street, below Twelfth. Workmen were cleaning out the deposit of black, greasy, putrescent matter, having first dipped out the liquid matter in buckets and poured it into the street-gutters. After emptying the well, the workmen measured its depth with a tape-line, and pronounced it to be twenty-seven feet below the board floor of the cellar, and said it extended to gravelly bottom and was walled up with brick. It might be presumed that, as the sewerage is extended, householders would make connections at once, and dispense with the cesspool or privy-well; but this is seldom true. It is only when the soil about the well becomes so saturated that it will no longer allow the liquid contents to soak away, and hence the frequent visits of the scavenger become troublesome and expensive, that any remedy is sought, and then the first step in improvement is to lay an overflow-pipe from the well, so that when full the liquid contents may run over and discharge through the pipe into the street-sewer."

Some years ago I read a paper on a sanitary subject in this city, and at its close I was invited by a gentleman living on one of your best streets, and near this building, to examine the condition of his drainage-works, which he obviously considered very perfect and instructive, on which he had expended much money, and which included a remarkable complication of waste-pipes and ventilation-pipes. The discharge of most of the drainage of the house was into a well in the cellar, under the dining-room, and it was considered a conclusive argument in favor of the system that that well had served for many years, with little attention, as a satisfactory means for removal!

In the second category are those houses which, with no direct communication with the sewer, deliver the drainage of kitchen, laundry, and bath-room into a privy-vault placed at the back of the lot, discharging its outflow, made foul by putrefaction and by the maceration of its solid constituents, into a sewer in the alley or street adjoining.

These may be considered, roughly, the two methods for getting rid of the foul wastes of houses throughout the city,—though direct communication with the sewer is not unusual. In very many cases there is a combination of the two methods,—a discharge of a portion into deep wells and of another portion into the overflowing privy-vault. If a judicious and proper connection of plumbing work with even tolerable sewers exists anywhere within the city, it is the exception rather than the rule. Mr. Baldwin's careful and long-continued examination failed to develop such a practice sufficiently extensive to be considered at all characteristic.

The foul wastes of a house are generally produced near its rear. Frequently the only possible connection with the sewer is at the front. The drainage is usually conducted from rear to front by a drain of earthen-ware pipes, much too large, being for a single building often eight, ten, or even twelve inches in diameter, laid in the ground underneath the cellar, and very often imperfectly laid and ineffectively jointed. Mr. Baldwin says, "A privy-vault in the back yard serves to accommodate the occupants of the house, or to receive the drainage from water-

closets, if any, in the upper stories. The vault is washed out by rain-water led to it from so much of the roof as inclines toward the rear. A terra-cotta or earthenware pipe, from eight to twelve inches in diameter, serves as an overflow to carry away the liquid contents of the vaults, passing under the cellar, buried about one or two feet in the ground. The waste-pipe from the sinks on each floor connects with and discharges into the main drain-pipe beneath the cellar. A hydrant in the back yard affords a supply of water for all purposes, principally for the laundry, which, in the summer season, is usually in the open air. Beneath the hydrant is a slop-stone with an iron grating through which the waste from the hydrant, the drainage from the yard, and the water from the wash-tubs pass underground to the same house-drain beneath the cellar. This is the common practice of drainage where houses present a solid front on the street and have no means of drainage to the rear. It may be seen in much of the older part of the city, and, in fact, all along the Delaware front below Fourth Street, and elsewhere."

In some cases, as an improvement on this system, there is a passage-way between each two houses, of which the pavement is depressed in the centre, and nearly all the drainage, except that from water-closets, there flows over the surface.

Mr. Baldwin further says, "There is a strong popular prejudice in Philadelphia against connecting dwellings directly with the sewers, doubtless caused or encouraged by the bad atmospheric condition and entire absence of ventilation of the public sewers. But, on the other hand, the custom is almost universally practised of turning sink- and slop-water on the ground, allowing it to flow across the side-walks and stagnate in the street-gutters."

I refrain from entering into a consideration of the wide prevalence of outside privies and vaults in many parts of the city, and of the offensive methods of removal of their accumulations, — which even the modern pneumatic process has been able only to mitigate, not to correct,—and confine myself exclusively to the ineffective attempts thus far made to secure a removal of liquid drainage by house-drains and sewers.

Perhaps a difference of training may lead you and me to take a different view of the seriousness of this question. You have lived all your lives subject to the system that I have described, and familiarity may well have made you tolerant of its defects. To one without such familiarity, the systems here prevalent can only seem altogether bad.

Our time will not permit us to go into the *details* of that part of the plumber's work in your city which has for its purpose the reception and removal of foul wastes. Some acquaintance with this work, obtained in the professional inspection of houses, leads me to the belief that this part of your system is hardly better than that which has been described more fully.

I trust that I shall be acquitted of any inclination to be sensational in what I have said. I am sure that I have not overstated the defects of your system, and any unpleasant sensation that my remarks may have produced must be ascribed solely to the inevitable effect of a moderate delineation of actual conditions.

The question naturally arises, What is the remedy for all of these defects? This is a very difficult question to answer. It involves the improvement of methods of plumbing, the reorganization and reformation of the existing sewer system, and, almost more serious than all, the devising of some means by which the liquid wastes of this vast and busy population, with all its houses, its shops, and its factories, and the added wastes of the great increase of population that is sure to come in the future, can be so disposed of as to be placed beyond the power of doing harm, either to the people of the city itself, or to those of other localities past which it must be carried, or in which it must finally be destroyed.

A complete answer would involve probably a possession of more knowledge than now exists. None the less is it incumbent on those who regulate the affairs of the community to endeavor to secure a solution of this great and vital problem in accordance with such knowledge as we now possess.

It would be fatuous to undertake, on an occasion like this, and in an off-hand manner, even to suggest the details of the great and necessary work of reformation. It seems proper, however, to indicate the line which efforts for improvement should follow.

One cardinal principle should be kept

always in view; that is, that *all organic waste matter should be delivered at its ultimate point of discharge before it has time to begin to putrefy*. This is the one great aim by which all works of sanitary drainage should be regulated. Simple and natural though it seems, it involves a radical departure from the all but universal practice of all communities.

The evil with which we have to contend is an enormous one. It is futile to attempt to combat its forces after they have been collected. They must be fought in detail, and at their recruiting stations,—in the houses,—and while single-handed.

A bit of broken meat, or other refuse matter, taken by itself, is not serious; if, driven immediately from its point of origin without being allowed a moment's halt by the way, we can secure its transmission to the distant outlet of a system of sewers, we get rid of it before it becomes serious. If, on the other hand, we allow it to lie in an inaccessible large trap, involved with congealing grease and associated with other refuse, the mass becomes immovable under the force of the stream ordinarily applied to it. It is slowly reduced by maceration and by putrefaction, evolving foul odors of decomposition, and, oozing away with the flow in a condition already mischievous, it goes on from bad to worse along the whole of its sluggish course. Much of it, often most of it, is decomposed, disintegrated, and turned into objectionable vapors before the outlet is reached. What is true of a bit of broken meat is true of other solid wastes. In the case of foul liquids of all sorts, unless the removal is complete, the resulting conditions are at least no better.

As it is with the houses so it is with the block, which is an aggregation of houses, and which is drained by a single channel that receives from each an addition to its injurious contents. Thus the condition of the sewer becomes foul and objectionable.

We have been taught to dread above all things else that enemy so universal in cities,—"sewer-gas." We have been taught to protect ourselves against its invasion of our houses by all manner of traps, ventilation-pipes, and disconnections. A careful examination of the drains of any house will show that the origin of this sewer-gas which we dread is not so much in the sewer as in the pipes of the house itself. We see that the very means adopted to prevent its intrusion from the sewer have often been added means for fostering its formation in our own drains.

We shall find in nearly all cases that traps, whether under sinks and closets or elsewhere, are too large to be washed clean by the flow of their ordinary supply of water. Probably the most usual diameter of the traps and waste-pipes of kitchen and pantry sinks, which are subject to obstruction by grease, is two inches. Under the best circumstances the grease accumulates till the water-way is reduced often to an effective diameter of less than one inch: that is, to one-quarter of the capacity of channel of the two-inch pipe. It is unlikely that any sink through which greasy hot wastes are discharged, even if its waste-pipe were only one inch in diameter at the outset, would send water through its strainer fast enough to keep this one-inch pipe free, though, of course, the difficulty would here be much less in degree than with the larger channel. In either case the water-way is surrounded, not by a lead surface, as we may fondly suppose, but by a surface of deposited greasy filth.

The traps under our closets must necessarily be large, because here a considerable water-way is required. As the difficulty in this case cannot be mitigated by contracting the size of the channel, it must be remedied by increasing the volume of water sent suddenly through it. Pan-closets and other closets which are flushed by a small stream, generally directly from the supply-pipe, are never provided with so copious a supply of water as is necessary to remove their deposits, which, therefore, remain until putrefactive processes have set in and until mischief is begun.

Putrefaction, whether of accumulations in traps and in pipes or of the mere sliming of the pipes, is of much more injurious character when carried on without the free access of atmospheric air than when such access is provided. Probably not one soil-pipe in one hundred in Philadelphia, or in any other old city, has a thorough ventilation: that is, a means for taking in air at one end and delivering it at the other. The mere carrying of the top of the soil-pipe, even at its full diameter, through the roof of the house, does not secure ventilation. This requires that

there should be an opening in the lower end as well, so that air may flow in at one end and out at the other. The movement need not be rapid,—indeed, it may be very slow,—but it must be constant. However our pipes may be arranged, we may be sure, if the upper end is open to the sky and if the lower end is open to the outer air or to the sewer, that there will be a constant movement, however slow at times, and that an adequate amount of fresh air to maintain a complete and wholesome decomposition, at least of the inevitable sliming of the walls of the pipe, will be secured.

It would be sound advice to give to every householder, whether his work be costly or cheap, elaborate or simple, to say that his main line of communication, the soil-pipe, should have such a free movement of its contained air as has been indicated; that its branches should all be small, so that the flow through them will be a cleansing flow, carrying all foreign substances immediately and completely through them; that, if these branches are long, they too should be ventilated with pipes leading to the outer air; that no trap should under any circumstances be larger than the pipes with which it communicates (it may often be smaller with advantage); that every fixture that is used should at each use deliver water enough to furnish an effective vehicle for all waste matters discharged with it; that every line of communication between a fixture in the house and the soil-pipe should be so effectively trapped that the passage of air from the waste-pipe into the house through the fixtures shall be and shall always remain impossible; and that, if a trap on the main drain, cutting it off from the sewer, is needed (and it is often needed in this city), a special inlet for fresh air should be supplied.

However this advice may be applied, if applied thoroughly, while there may still be disagreeable odors from sloppage, from foul fixtures, and from foul overflows, the sanitary condition of the drainage-works of the house in which it has been faithfully followed may be regarded as sufficiently safe. Home-made sewer-gas, which is the bane of most houses, will not exist there.

If this improvement can be made in one house, it can be made in all the houses of the block, and in all the blocks of the city. We may have the foulest possible condition of the street sewers and of the wharves and slips and rivers, and our nostrils may be accosted with foul odors from open manholes and inlet-basins; yet we may be sure that in our houses we are safe.

It is assumed, of course, that all vaults, cesspools, and foul "wells" are to be completely eradicated as soon as other means of discharge shall have been provided.

If, on the other hand, houses are left in their present condition and subject to their present grave drawbacks, we may spend as much money as we like on disposal works and main sewers and branch sewers without very materially modifying the sanitary conditions to which we are most subject and most sensitive. Here, then, should be the point of departure of the reform.

Before men are taxed for the building of sewers in their streets, they should be compelled by a rigorous health authority to tax themselves to make the interior drainage of their houses safe. It cannot be questioned that every dollar spent here—spent in getting beyond our own walls the material without whose retention organic putrefaction cannot take place—will have far more influence on the health-rate and on the death-rate of the people than will a larger sum spent on the sewers before their doors.

The house itself having been rendered fit for human habitation, the next care should be given to its immediate surroundings. The cesspool in the yard and the vault under the privy—seats, both of them, of the vilest and most dreaded decomposition—should be absolutely abolished. The uses which they now serve should be served by the public sewer. Better the worst sewer in town, properly barricaded by good house-drainage, than the ordinary cesspool and vault with their greater accumulation of filth.

The houses being drained and being brought into communication with the public sewer, then—and in my judgment not till then—attention should be given to *public* works of drainage. Even then, let us continue with the idea fast in our minds that what we have to do is not to take the foul and putrid flow of house-drains and branch sewers and carry it by a perfect main sewer to the river; but, by the con-

struction of proper and properly maintained local sewers, to push on farther and farther from the houses the point at which cleanly and prompt removal gives place to putrefaction.

The local sewers being thus reformed, and all their contents being in a condition of free movement, with an entire absence of decomposition, then—and not till then—can we with the best advantage undertake the work of reconstructing our main sewers, whose final office it is to continue the free movement of our local sewers, and to carry, well beyond the limits of the town and still in a fresh condition, the wastes which have recently started on their course in the well-flushed sinks and closets of individual houses. It may perhaps be assumed that no house in Philadelphia is or is to be more than five miles away from the outlet of the present main sewers—which under present conditions would be into one or the other of the rivers. Let us assume the maximum distance to be twenty-five thousand feet. With properly constructed house-drains and sewers, the constant and uninterrupted movement of waste matters will be at the rate of at least two feet per second, or one hundred and twenty feet per minute, or over seven thousand feet per hour: so that in less than four hours from the time of its production our refuse food and other wastes will have passed from our houses to the river. Were they to occupy five times four hours, they would undergo no such decomposition as would produce injurious results. Under existing conditions, a large part of the material occupies *five times four days* in making the journey. Much of it never reaches its destination at all, and what does reach there, instead of being mere waste organic matter in a fresh, manageable condition, is a putrid mass of filth, which it has thus far taxed human ingenuity beyond its power to dispose of safely and inoffensively by discharge into rivers.

If you will visit the main outlet of the drains serving the community of fifteen hundred persons collected at the State Insane Asylum at Norristown, where everything of whatever character that is delivered into the drains is discharged at the outlet in a very short time, and will then visit the open mouth of any sewer in Philadelphia, you will understand the difference of condition that I have endeavored to set forth, as no mere description can make you understand it.

The drainage question in Philadelphia involves still another problem of most serious character, based on the probable inability of the shifting waters of the Delaware River to dispose safely of the wastes of a community so large as this is or is in time to become.

Attempts at efficient disposal of foul sewage, on a large scale, by delivery into rivers have thus far failed. London has spent about thirty million dollars in intercepting sewers and pumping stations arranged to deliver its stagnant sewage into the Thames far below the city. The effect on the river has been such as to cause grievous complaint, and a Commission under the presidency of Lord Bramwell has recently reported upon it, condemning the conditions now existing as "a disgrace to the metropolis and civilization." This Commission suggests as a means of remedy an incomplete purification by a chemical process that would cost about a million dollars a year, to be supplemented by further purification by application to the land. Paris is dealing successfully with a portion of its outflow, but it is still at sea as to the best course to pursue with reference to the rest of it. It has been demonstrated there, and at Berlin and Dantzic and elsewhere, that a sufficient amount of suitable land is capable of purifying any amount of effluent, no matter how foul.

If a sufficient area of sandy soil could be provided, and if the sewage of Philadelphia could be transported to it at a practicable cost, the question of disposal would be definitely determined; but the cost would be enormous.

The problem, as it confronts us to-day, can, it seems to me, best be solved by getting rid at the outset of the element of *foulness*,—that is, of all putridity. This being done, and it being a question only of the disposal of *fresh* sewage, the case takes a new aspect and is greatly simplified. All who have been much about the waters in the vicinity of towns know that any object thrown overboard is at once attacked by a multitude of fishes, great and small. If not too hard to be broken up by the attack, unless it is putrid, no matter what its character, the whole of it seems to be consumed. The Delaware is even now sufficiently pure to be frequented

by fishes. No doubt these are an important agency in the destruction of much that now reaches it from the sewers. It cannot be doubted that if all solid waste matter produced in the city, of whatever kind, were carried out into the river by garbage-boats, and there dumped, it would be consumed as ravenously as is the garbage of New Orleans, which is daily dumped on the feeding-ground in the middle of the Mississippi, where schools of fish, of all sorts and sizes, are waiting to struggle for it and, apparently, to consume it on the instant. If all of the solid wastes which are subject to transportation in the flow of the sewers were delivered immediately, *in a fresh condition*, into the Delaware, there seems to be no reason to doubt that the whole of it would be incontinently eaten up, and that, so far as these materials are concerned, the destruction would be as complete as though the material had been thrown into a farmyard for consumption by poultry and swine. Nothing that is not putrid is rejected by these, nor do we reject them from our tables because of the meat on which they have grown. Nothing not putrid would be rejected by the river-scavengers, nor need we consider the nature of their food in using them as food for ourselves.

Probably the capacity of the aquatic life of the Delaware to consume the solid wastes of Philadelphia is, and would long remain, adequate to the task. Unfortunately, solid wastes do not offer the chief, nor the greatest, of the difficulties to be overcome. Foul liquids, or, rather, the foul matters in solution and in suspension in liquids, are much more serious. This matter is widely diffused and is intangible. It is a question by no means to be settled so easily whether or not it would be consumed by the higher organisms on shore or in the water. There is, however, reason to suppose that the whole range of animalcula and algæ, and doubtless the lower organisms and those that fill the intervening space between them and the fully-developed fishes, are also active in converting dead organic matter into a new form of organic life.

The extent to which the processes here indicated are available for practical sewage-purification is still far from being determined. It seems altogether likely, however, that the extent is much greater with matters of recent production than with those which are associated with the products of putrefaction due to stagnation and to delay in transmission. Another unfavorable element, in a manufacturing town, is the quantity and character of some of the chemical wastes of factories. Mr. F. Lamborne Flower, Chief Sanitary Engineer of the Lee Conservancy Board, has written to the *Times*, "as having almost daily experience of sewage-outflows for the last fourteen years, and being the only officer in the kingdom in sole charge, for sanitary purposes, of an entire water-shed," that, "if sewage is to be utilized as food for fish, it must be delivered in a fresh and not in a decomposed condition, and also be free from chemical refuse or improper chemicals used for sewer-treatment. Fish thrive at a sewer-outlet, but those taken near a *foul* drain rapidly become putrid."

It is here, rather than in the drainage of houses and in sewerage, that the uncertainties of the case lie. We have as yet no means of knowing to what degree we can depend on the life of the river to get rid of our solid and liquid wastes. We do know sufficiently well how we can deliver our solid and liquid wastes into the river, while fresh, without offence and without danger.

As a practical question, we know that were the outflow of the sewers fresh, as it might be made, instead of being foul, as it now is, the condition of the river would be immensely improved. Therefore, the prudent course to follow would seem to be to do first that which is necessary to deliver all wastes in a fresh condition, and to take up afterwards the question of ultimate disposal.

So far as we now know, if the river will not permanently dispose of the outflow, it must be disposed of by application to the land,—a process which ample experiment has proved to be absolutely successful.

The necessity for such disposal in your case would involve the sending of the sewage to a distance, requiring, on the score of economy, that it be not diluted with storm-water, which may go directly to the river. It would be necessary, also, to control an ample area of light, porous land. This part of the problem does not now, however, present itself as an imminent one. Assuming that the first thing

to be done is to improve the house-drains and sewers of the whole city, there is reason to hope that important new developments with regard to ultimate disposal will be made before that part of the work will be reached.

In looking over the few, simple statements made this evening, and seeing how free from complication and difficulty each detail of the work of improvement would be, the thought may naturally recur that a great clamor is made for what may seem a fanciful object which can be attained only by great expenditure. Full justification, however, for the most serious attention that can be given to the subject comes without seeking, when we consider the unceasing influence of defects so familiar to us that they may appear slight on the life, the health, the efficiency, and the happiness of the community.

ORIGINAL COMMUNICATIONS.

REPORT ON RECENT PROGRESS IN PHYSIOLOGY.

VULPIAN ON CEREBRAL PSYCHOMOTOR LOCALIZATION.

M. VULPIAN, in a series of communications lately made to the Académie des Sciences, has made statements tending to undermine the belief concerning the functional action of certain cerebral regions known as psychomotor centres, which has been gaining ground since the experiments of Fritsch and Hitzig. It will be remembered that these scientists demonstrated that if a galvanic current is passed along certain regions of the cortical substance, movements are provoked in the limbs of the opposite side or in the opposite side of the face. These regions have been considered as the centres where volition is transformed into nervous impulses. Experiments made by other physiologists confirm those of Fritsch and Hitzig. Charcot and others also observed that lesions of these regions in the human subject provoke paralysis either of the limbs of the opposite side, or of the face. M. Vulpian has recently demonstrated that, after having determined what is the minimum electrical stimulus necessary to apply to the gray substance in order to provoke movements, the same effects are obtainable by a feebler current if *isolated* electrodes (entirely covered with gutta-percha, except at the extremity) are allowed to penetrate the gray cerebral substance until they reach the white matter and stimulate the white bundles. M. Vulpian also affirms that epileptic attacks are likewise provoked by stimulating the underlying white bundles by weaker currents, which last less time than those used for stimulating the surface of the gray substance.

Other experiments made by this distinguished physiologist gave still more striking evidence that the gray cortical substance is of quite secondary importance in the pathogeny of epilepsy; or, in other words, the functional activity of the gray cortical substance is not necessarily invoked. M. Vulpian proved this by freezing the cerebral surface of a dog by means of methyl chloride, and then applying a stimulus which provoked epilepsy. Thus M. Vulpian's researches establish the unreliable character of certain experiments which have been quoted as indications that the motor excitability of the cerebral gray cortical substance exists in certain areas.

It is also evident from M. Vulpian's researches that the hypothesis of cerebral functional localization cannot be based on those experiments. Furthermore, they show that nerve-fibres destined to transmit cerebral motor impulses from certain regions to a limb, for example, may issue from a certain circumscribed limited area without the superposed gray substance being necessarily a defined initiating centre. Since Brown-Séquard's celebrated experiment, which proved that blood injected into the vessels of the head of a dog severed from its body provokes vital manifestations, the question has been raised whether, in virtue of the latent life which was maintained, sensations were felt, though they could not be transformed into initiative phenomena. M. Vulpian, during his series of experiments, observed that in less than a minute after the last heart-beat, neither faradization of the gray cerebral substance nor of the white provoked the slightest movement of either the limbs or the face, though the currents were sufficiently strong to provoke them before death. Much stronger currents provoked contractions, but these contractions were due to a physical transmission of the current from the point electrified—from element to element—to the nerves and mus-

cles. This experiment establishes the accuracy of those which have indicated that among the higher orders of mammals the cerebral substance loses its motor stimulus as soon as the circulation is arrested in the nerve-centres.

CHEMISTRY OF COLLOIDS.

M. Grimaut, the learned professor of chemistry at the École Polytechnique, whose biological researches are always distinguished by remarkable analytical power, has communicated to the Biological Society the results of his researches on colloid substances. Among the interesting facts he exposed are the following. If the product obtained by heating phosphorus perchloride with amido-benzoic acid be submitted to the influence of ammonia, the result is a substance M. Grimaut calls amido-benzoic colloid. It resembles albumen in its behavior to reagents. It coagulates in the presence of acids, salts, and lime-water; also under the influence of heat. A very weak solution does not coagulate under the influence of heat, but the addition of sodium chloride in solution coagulates both substances, the albumen and the amido-benzoic colloid. If a weak solution, after ebullition, be submitted to the influence of carbonic acid, a white coagulum is obtained, which disappears when the carbonic acid is replaced by atmospheric air. This substance is undoubtedly a synthetical albuminoid. M. Grimaut exposed the results of another series of experiments, showing that the time will soon arrive when the history of albuminoids will be known; but whether or not this knowledge will bring with it that of creating living protoplasm is a question M. Grimaut, unlike many other savants, answers in the negative. It is within the limits of science to be able to produce a body possessing all the properties of albuminoids, offering all their reactions, having the same composition, behaving in every way the same, but the vital problem will not be solved. Nothing indicates the origin of the first vital impulse which converts an albuminoid into a living cell. To the chemist there is no appreciable difference between a fecundated and a non-fecundated egg, yet the former is endowed with that motor energy which imparts the vital properties of living and developing which characterize a moving, living organism.

EFFECTS OF HEAT ON MICRO-ORGANISMS.

M. Charles Réchet, at a recent meeting of the Biological Society, stated that heat helps the action of substances that impede or arrest development of micro-organisms. In two bottles of urine, mixed with a few drops of putrid urine, five milligrammes of mercuric chloride were added. One remained in the laboratory, the other was placed in a stove at 40° C. (104° Fahr.). In the former, micro-organisms were developed; the other, which was subjected to heat, remained clear and limpid. During the meeting M. Arloing called attention to the fact that he had previously made known the influence of heat on substances that arrest or impede the development of micro-organisms. His experiments were made with carbolic acid and mercuric chloride and borax, etc., acting on the virus of "charbon" and septic virus.

HISTOLOGICAL WORK AT THE COLLÉGE DE FRANCE.

The yearly volume of the work done at the histological laboratory of the Collége de France has just appeared. It contains a paper from M. Ranvier, the learned principal of the laboratory, on the particular kind of fatty matter that he discovered two years ago in the stratum lucidum of the skin, and named by him *eleidin*. In the present memoir he studies the distribution of this substance in the skin, the buccal and œsophageal mucous membrane of vertebrates. The memoir cannot be analyzed, it is too full of detail; and it is too long to give in full. We will therefore limit our description to repeating M. Ranvier's statement, that in all epithelioma and hypertrophied papillæ *eleidin* is more abundant than in a normal condition. When, in consequence of an inflammatory process, the keratinization of the skin does not operate, *eleidin* is absent.

M. Malassez and M. Vignal also contribute a memoir on the micro-organism of a special form of tuberculosis which these scientists described last year, under the name of *zoöglœic tuberculosis*. M. Malassez and M. Vignal demonstrated that when in tuberculous lesions Koch's bacillus is not discovered, but nevertheless inoculations provoke in animals bacillary tuberculosis or a disease presenting the same course and the macroscopic and microscopic appearances that characterize cer-

tain forms of tuberculosis in the nodules, instead of finding Koch's bacillus, micrococci are observed arranged in glomerate masses or dispersed among the tissues. M. Malassez and M. Vignal, failing in successfully coloring these micro-organisms, considered the following problem unsolved: Is there any relation between the bacillus of Koch and these micrococci, or is the form of tuberculosis they invoke one apart?

In the second memoir published by these histologists (the one that now appears in the yearly volume) they give the following formula for coloring zoöglœic masses: ten parts of carbonate of soda at two per cent., five of distilled water saturated with aniline oil, three parts of absolute alcohol and of methylene blue in solution (made with nine parts of distilled water, and one part of concentrated methylene blue in solution in alcohol at ninety degrees). This fluid stains blue the micro-organisms of the zoöglœic tuberculosis and those of glanders, but no others. The authors conclude that the micro-organism of the zoöglœic masses is quite distinct from Koch's bacillus; also that the two forms of tuberculosis are differentiated one from the other. These data explain the absence of Koch's bacillus in extended lesions which result in death and also present all the macroscopic features of tuberculosis. They likewise indicate the wisdom of being excessively careful in making diagnosis of tuberculosis or declaring its absence when neither Koch's bacillus nor the micrococci of Malassez and Vignal is detected. It is very possible that, besides these two kinds of micro-organisms, others exist, though Koch's bacillus is undoubtedly the most frequently met with.

M. Vignal contributes another paper in the volume. This one is on histogenesis of the elements of the spinal cord, in which he studies the development of the elements of the spinal cord in the higher mammalia and in man. The earliest stages of development were studied in embryos of sheep, it being difficult to obtain human embryos before the sixth month is reached which have not before expulsion been macerating some time in the uterus. M. Vignal recommends studying sections after hardening them with the following mixture: equal parts of osmic acid in solution at one per cent. and alcohol; then embedding in collodion. He finds that with this mixture better results are obtained than with salts of chromium. For dissociation he advises maceration during twenty-four hours in alcohol (thirty-six per cent.). The elements of the spinal cord are then dissociated by simply shaking.

M. Vignal has observed that the elements which exclusively belong to the spinal cord develop quite independently of the mesoblast, and that they proceed solely from the elements of epiblast which constitute the primitive groove. Gray substance appears in the spinal cord towards the twentieth day of human embryonic life; primarily it constitutes two kinds of ridges on each side of the spinal cord. Its component cells are not defined: that is to say, they do not present definite characteristics. About the tenth week of fœtal life some of these cells present the features special to nerve-cells. The cells in the anterior horns are first differentiated; subsequently those of the posterior, and lastly the Clarke columns. Towards the fourth month the prolongations of Deithers begin to appear distinct. About the sixth month the cortical portion of the cells begins to present a fibrillar aspect. At the time of birth they present the structure of adult cells, only they are smaller. They never contain pigmentation-granulations, which induces the belief that these granulations proceed from degeneration. M. Vignal has also studied the development of the nerve-fibres of the spinal cord. He believes them to be cellular prolongations (axis-cylinder) covered by cells of a special character secreting myelin. According to this author, neuroglia is composed of some of the primitive medullary cells. Their evolution is effected in a certain way, while the other primitive medullary cells develop into nerve-cells. It is impossible for us to enter into the details of their evolution. M. Vignal clearly indicates the measures necessary to be taken in order to follow step by step the evolution of the primitive cells of the mesoblast into nerve-cells and neuroglia-cells. There are eight plates to this memoir, which represent the gradual transformation of the elements of the spinal cord and of the spinal cord itself.

Two memoirs by M. Malassez follow the one by M. Vignal described above. One is on the camera lucida for microscopical drawing; the other is on the mi-

crotome of Roy, a well-known English physiologist. Until the art of photographing microscopical preparations is greatly improved, the camera lucida will continue to be the instrument in general use. Microscopic photography is only occasionally useful, and needs considerable experience. A camera lucida for microscopical drawing must fulfil many conditions. There is one especially important, with reference to the angle formed by the ray proceeding from the preparation and by another from the paper used for drawing. This angle is ninety degrees in Wollaston's and Amici's camera lucida, from fifteen to eighteen degrees in Nachet's, Milne-Edwards's, etc. When the angle is at ninety degrees either the microscope or the paper must be placed in a position which renders working at ease impossible. Another disadvantage is that, in order to prevent the drawing from being considerably magnified, a complicated optical instrument must be used. With those of an angle of fifteen or eighteen degrees the drawing is magnified in one particular direction: a square is changed into a trapeze, a circle into an oval. M. Malassez has studied this question, and proposes different methods for remedying the faulty conditions. He advises that the camera lucida in which the reflection falls on a transparent glass should be abandoned, because so many luminous rays are lost; also frequently the object reflected is double. Those in which the image is reflected on a metallic mirror M. Malassez also condemns: the reflection is too quickly dimmed. He recommends the exclusive use of the camera lucida made with prisms. He prefers those of Doyère and Milne-Edwards, in which the large prism is movable and a maximum angle of forty-five degrees can be reached. The microscope is bent backward to an angle of forty-five degrees; the image reflected on to the paper placed behind the microscope preserves its accurate proportions. The position in which the paper and the microscope are placed prevents fatigue to the worker, and is the position adopted where there are a great many preparations to examine. In those exceptional cases where the objects to be drawn float in fluid and therefore shift about when the microscope is on an incline, the angle of the camera lucida should be made more acute and reduced to an angle of fifteen or eighteen degrees (the smallest angle with which reflection can be obtained). The drawing-paper should be placed by the side of the microscope at the same angle as that of the camera lucida: the images by these means are not distorted.

Roy's microtome has been modified by M. Malassez, and considerably improved thereby. It is much more easily used,—sufficiently so to become generally used in public laboratories, where such instruments are required as do not demand any special skill on the part of the worker, and also which do not quickly get out of order. With this microtome the substance to be cut is fixed to one end of the rectangular copper slab, perpendicularly placed on a small horizontal board. The razor is fixed on to a movable piece of copper, attached by a vice at the opposite extremity of the copper slab. This is moved downward as required. The movement is regulated by a lever acting on a dentated wheel. M. Malassez has made the downward movement automatic. This is effected by drawing back the razor after a section has been made. A spring brings back the lever into position. The length of the lever is just sufficient to forward the dentated wheel one tooth. Sections of one-hundredth of a millimetre are thus obtained, or two-hundredths of a millimetre, according to the length of the thread of the vice. Unlike the original microtome, the copper slab which supports the mechanism holding the substance to be cut is movable. This alteration, which enables sections to be made in alcohol, is a great advantage in the case of soft tissues, which are so easily torn. M. Malassez substitutes methylene chloride for ether, generally employed for congelation. The former body produces a lower degree of cold. It is not necessary to use the spray with the methylene chloride, as it is gaseous at the ordinary temperature. When the tap of the receptacle is opened, and the methylene chloride directed on to the slab on which is the substance for cutting, this latter is immediately frozen, and a number of sections extending over a considerable area can be made with ease. M. Malassez has also modified the manner of fixing the razor, which renders the angle of inclination more suitable for making sections. All these improvements of Mr. Roy's microtome render it an excellent instrument for laboratory use. The sec-

tions made with it are not so fine as those obtained by sliding microtomes; but as sections of one-hundredth of a millimetre are generally thin enough, and the excessive care required in using the sliding microtome is not necessary with Roy's, it is preferable. A large number of sections can be made in a few minutes, either with fresh tissues or on hardened tissues.

The last memoir contained in the volume is by M. Suchard, "On the Corpuscles of Tact in the Genital Organs and the Conjunctiva." The author arrives at the following conclusions. In the conjunctiva of calves corpuscles of Pacini are present, as those histologists who have studied the question admit. In the conjunctiva of man the corpuscles are rounded, like those of Meissner. In the mucous membrane of the male genital organs of the human subject the corpuscles are composite Meissner's corpuscles, remarkable from their size and the net-work of nerves which terminate in them. The corpuscles in the mucous membrane of the genital organs of the rabbit are prolonged, but apparently belonging to the ordinary type of Meissner's tact-corpuscles. A large number of Pacini's corpuscles, varying in size, are also observed in the mucous membrane of rabbits' genital organs. These different corpuscles can all be ranked among the simple type. Nerves terminate in them according to the general law, by free extremities between the cellular elements.

As we are speaking of the work done at the Collége de France this last year, we cannot leave the subject without devoting a short space to M. Marey's researches. It is well known that he has perfected the different graphic methods. At the present time he is engaged in making researches on the different positions the body assumes in walking, either carrying a weight or not; also the influence of different kinds of boots and shoes on the position assumed either in walking or jumping. The importance and bearing of these researches are evident, both for pedestrians and soldiers.

Part of M. Marey's researches were published last year in the Transactions of the Paris Académie des Sciences. Let me here briefly describe the method adopted by M. Marey in making his researches. Instantaneous photography is a great adjuvant. The apparatus used obtains in a second forty photographs. An interval of six-hundredths of a second elapses between each photograph, and the photograph is taken in four-hundredths of a second. In order to succeed in taking photographs of this nature, evidently special conditions are necessary. The apparatus is thus constituted: a plate of bromide-gelatin with two obturators, one of which changes its place by a movement transmitted to it by the operator by means of an india-rubber inflator; the other obturator is a metal disk moved by an electrical motor and executing fifty rounds in a second. This disk is crenellated, which allows the light to pass through during a short space of time, just sufficient to leave an impression on the plate. This arrangement renders it impossible to photograph objects in their entirety; they would be a confused mass. M. Marey dresses the sitters in black velvet, and indicates by white lines and points the position of the bones. As the person executes the movements desired before a black velvet screen, the lines and points previously traced are solely reproduced on the photograph. Clear indications are thus obtained of the position each part of the body assumes during different moments of motion.

RATE OF LOSS OF MOTOR SENSIBILITY IN DIVIDED NERVES.

It is well known that when a nerve has been divided, after a few days it loses its motor sensibility (in a dog, four days after section); but it was never known in what progressive proportion this sensibility was lost. This has been determined by M. Quinquand. He cut the nerve of a limb; the extremity of the limb was attached to a dynamometer; the nerve was stimulated by an electrical current, and he ascertained the weight the limb was capable of lifting. He also observed that the motor force is not lessened until twenty-four hours after the section of the nerve. It then continues to diminish progressively during eighty hours after section, until the limb can barely lift a weight of five hundred grammes or even less. M. Quinquand draws attention to the necessity of appreciating the value of two phenomena involved in the result of these experiments: one proceeding from the loss of sensibility of the nerve, the other from the loss of muscular force. When the muscle is directly stimulated, it is easily

observed that the primary force is lessened. M. Quinquand has thus ascertained that the motor excitability of the peripheral end of the nerve is not increased immediately after section, but remains normal during twenty-four hours afterwards.

IMPROVEMENT IN ELECTRICAL ELEMENTS.

M. D'Arsonval, *chef du laboratoire* of M. Brown-Séquard at the Collége de France, has recently described several electrodes which cannot be polarized, and which will render incalculable service in making electro-physiological researches, especially as they can replace the polarizable electrodes ordinarily used in clinics. The electrodes made according to M. D'Arsonval's directions consist of a silver capsule containing melted silver chloride covered with chamois leather. In these electrodes silver chloride plays the part of zinc sulphate; but, as it is insoluble in water, it can be brought into contact with the tissues. Silver chloride can be replaced by dioxide of manganese and charcoal or peroxidized lead plates (the positive plates of accumulators). For studying living tissues, instead of ordinary needles those made of steel are used, and are coated with silver chloride by the following method. The needles are plunged into a strong solution of silver nitrate; when this is dried, into one of sodium chloride. Thus a layer of silver chloride is formed, which adheres to the needles on being melted after it has dried. M. D'Arsonval in his communication mentions a fact which alone shows the utility of his electrodes: electrotonus is manifested in nerves stimulated by these electrodes the same as with other electrodes, which proves that electrotonus is not produced by a secondary polarization resulting from the electrolytic effects of a current, as many have attempted to prove since Matteucci's experiments.

PARIS, June, 1885.

TRANSLATIONS.

DIGITAL EXPLORATION OF THE STOMACH.—In a case reported by Billroth before the Imperial Royal Medical Society of Vienna, of a girl of 19 years, who had swallowed in her sleep an artificial denture, it was found that the foreign body had passed into the stomach. Believing that it could not pass through the pylorus, Billroth performed laparotomy and gastrotomy, but could not find the denture even after drawing the stomach out of the wound. The wound was enlarged and the intestines examined, but in vain. The only part remaining unexplored was the posterior portion of the stomach, situated behind the gastro-splenic ligament towards the vertebral column. Introducing his hand into the stomach, the article sought for was found and removed. He then brought the gastric wound together with ligatures and cauterized it, and closed the abdominal wound. The patient recovered.

The case was reported in order to show where to search for a foreign body in future, and to demonstrate that the stomach cannot without great difficulty be brought outside of the abdominal wound. In attempting this the foreign body was carried back to the posterior portion of the stomach, where it at first escaped detection.—*Le Progrès Médical*, April 18.

TRICHLORACETIC ACID AS AN ANTISEPTIC.—In one- or two-per-cent. solutions trichloracetic acid is a powerful antiseptic, according to Dr. Filippowitch. It is a crystalline body of an agreeable odor, and soluble in alcohol and water. It coagulates albumen, and in concentrated solutions is caustic, and precipitates pepsin and peptones. It is a valuable dressing for putrefying and indolent wounds, and is said to be an excellent application for erysipelas. In dilute (one to two per cent.) solutions it has been used in gastric catarrh, in doses of two to five grains three times a day to an adult. Its use as a preventive against cholera has been suggested, in two- or three-grain doses, well diluted, three or four times a day.—*Gaz. Méd. de Paris.*

CAN TUBERCULOSIS BE COMMUNICATED BY VACCINATION?—Investigations made by Dr. J. Acker (*Centralblatt für Allgem. Gesundheitspflege*, December, 1884) upon some phthisical subjects, whose sputa contained abundant bacilli, showed that the vaccination-vesicle did not contain bacilli in its lymph. He believes, moreover, from other experiments, that even when bacilli are present no danger can arise from the very superficial wound of the skin made in vaccinating.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 27, 1885.

EDITORIAL.

SUMMER RESORTS FOR THE SICK POOR.

IT is a matter of common observation that the habit of taking a vacation by dwellers in our large cities is one that is growing in favor, and increasing numbers of those who are sufficiently well-to-do seek the mountain, plain, or sea-shore, and remain there during the summer. This is not due merely to fashion, or to the desire to escape the discomforts of dwelling in the hot city, or to the attractions of the summer resorts, although these are potent; but there is a growing conviction that there are conditions of city life which are inimical to health, and which are especially active during the heated term. This fact is known to none so well as to the physician who is a daily visitor to the homes of the poor, where he finds himself thwarted in the care of the sick by the bad hygiene of the surroundings, the improper food and miserable attendance, made tenfold more active for harm by the relaxing and exhausting effects of heat. Under such circumstances a change of air is often the one thing needful to turn the scale and convert impending failure into success; but it too often happens that to recommend a visit to the country only seems like mockery to the poor invalid.

It is a pleasure to know that the wants of such patients have not been neglected by the charitable in their schemes of practical benevolence. Our attention has been directed to one of the latest of the institutions for this purpose. The Sea-Side House for Invalid Women, better known as the "Mercer Memorial," is situated at Atlantic City, and is now open for the accommodation of invalid women of moderate means, not suffering from contagious disease. This building, one of the finest of its size in Atlantic City, is provided with every convenience for the care of sick women. Its sanitary arrangements are believed to be as nearly perfect as they can be made. It has a capacity for treating seventy-five patients, and has all the conveniences of a first-class hospital. The charge for medical attendance, medicines, nursing, and boarding is four dollars a week; and the railroads issue tickets at reduced rates. Application must be made before going to Atlantic City to any of the managers, or to Dr. William H. Bennett, who is the Physician in Charge.

The Children's Sea-Shore House at Atlantic City, also under the charge of Dr. Bennett, has been in operation for several years. It admits invalid children of both sexes, without regard to color, creed, or nationality, and has accommodations also for mothers with young children in cottages. Its charges are three dollars per week for a mother with either one or two children, and two dollars for children unaccompanied by mothers.

A cottage for the convalescent patients of the Friends' Asylum for the Insane, of this city, has just been opened at Atlantic City, under the care of Dr. J. C. Hall. It is known as Gurney Cottage. It is conveniently located, and admirably adapted for the purpose of treating cases of mental disease of mild type, in addition to convalescent patients from the Asylum.

A Cottage Sanitarium has been opened for patients with moderate means in the Adirondack region, near Saranac Lake, which promises to accomplish much good, under the charge of Dr. E. L. Trudeau.

Physicians, who appreciate the great good accomplished by these institutions, which are supported by voluntary contributions, are in good position to commend them to the attention of those who are

able and willing to aid in such humane and philanthropic work.

PROFESSOR HENLE.

BY the death of Friedrich Gustav Jacob Henle, Germany has lost one of her greatest and best-known anatomists, and the profession a man who served it nobly and well for nearly half a century. His early education was with Rudolphi and Johannes Müller, and in 1837 we find him a prosector and docent in Berlin. In 1840 he went to Zurich as Professor of Anatomy and Physiology, and in a few years was transferred to Heidelberg, and, in 1852, to Göttingen, where he labored until his death.

Henle is a curious instance of a man with a double reputation. We know him now as the learned anatomist whose great work is everywhere read and consulted. So familiar is his name in this department, and so many and valuable are the anatomical monographs and memoirs which he has published during the past forty years, that his early and important work is forgotten. We do not remember him as the profound and philosophical pathologist,—the founder, indeed, of rational pathology. And yet we can safely predict that in the years to come, when the history of medicine in the nineteenth century is written, Henle's fame will rest largely upon the fact that he was the first exponent of the germ theory of disease and the pioneer investigator in a department of medicine the extraordinary development of which characterizes this part of the century.

In a modest little volume entitled "Pathologische Untersuchungen," Berlin, 1840, the first section of which is devoted to the subjects of Miasm and Contagion, we have an exposition of the theory of infection as at present held,—not a mere sketch, but a full, detailed statement covering eighty-two pages. He lays down the reasons which compel him to think that "the material of contagion is not only organic and living, but is endowed with individual life, and in relation to the body is a parasitic organism." The whole chapter differs from any recent exposition of the doctrine of contagium animatum solely in paucity of illustrative facts which better methods of research have provided. As a possible explanation why the parasitic bodies are not seen in many diseases, he suggests that they may be too small for the microscopic powers then in use, or that they had the same degree of translucency as the tissues in which they lived. In the larger work, "Handbuch der rationellen Pathologie," Bd. ii., 1853, we find the same admirable presentation of the theory which he lived long enough to see established on a sure basis of fact.

THE DISPOSAL OF SEWAGE.

IN the very able paper by Col. Waring, which we have pleasure in laying before our readers, the Drainage Question in Philadelphia is discussed in a thorough manner that deserves and will command attention. He shows, first, that our low death-rate is mainly attributable to the porosity of the soil, and to the absence of overcrowding and of extreme poverty, and expresses the opinion that with proper hygiene and improved sanitary conditions the death-rate need not be more than eleven or twelve per thousand, instead of eighteen or twenty, as it is now; or, according to his calculation, our recognized and remediable sanitary faults cause seven thousand unnecessary annual deaths. One of the principal problems is how to supply the inhabitants with pure air to breathe, which, with dry air to live in, he considers the final outcome of the whole business of sanitary drainage.

The question of the disposal of sewage, which has been the great obstacle in the way of sanitarians, and which has led to such costly and unsatisfactory experiments in London and Paris, he shows to be,

after all, quite easy of solution. If the organic matter can be delivered from the sewers into a large watercourse before putrefaction occurs, it will be disposed of without difficulty by the fish, who are natural scavengers. This end may be attained by making proper house-connections and flushing the drains: by this means all organic matter can be made to traverse the sewer to its outlet in a city like Philadelphia in less than four hours, long before decomposition can occur.

The other suggestions in this valuable paper, concerning the faults of sanitation in our houses and the dangers of old cesspools and hidden vaults, and the means of correcting some of them, we commend to the attention of our readers.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

"SUPPORTED by Voluntary Contributions." This announcement, so commonly found on the front of our charitable institutions, was what most impressed an intelligent foreigner when he visited England. The hospitals and infirmaries of England are maintained without state aid. In making this statement it may be well to explain that there are also parochial sick asylums, now becoming numerous; but these are only for paupers. Such institutions are kept up out of the rates, and are under the management of the different Boards of Guardians, and supervised by the local government Board. They are utterly and essentially different in every way as to management from the institutions maintained by voluntary contributions. The parochial sick asylums are under the control of a medical superintendent, who has an assistant medical officer to help him. The other hospital is worked by a committee with a staff of honorary officers, with residents under the control of the honorary staff. The two have no points of resemblance except the treatment of sick persons. It has been at these hospitals, endowed by the gifts and legacies of benefactors, and further aided by voluntary contributions, that all medical research in this country has been hitherto conducted and carried on. Many have become medical schools, and with a full staff of teachers have provided the medical education of this country. As schools of medicine they have become famous, and so have become popular with the public; while the reputation gained by individual members of the staff at the hospital has commonly led to general recognition of his merits outside. Every ambitious young medical man strives his utmost to gain a foothold on the staff of a teaching hospital. Experience and reputation are there to be gained; while there are also students who, when launched in practice themselves, will call in their old teachers when a consultation becomes desirable. This has all become time-honored; but there is a change looming up. The cloud is no bigger than a man's hand, but it is there beyond dispute, all the same. The hospitals are all feeling the pinch of hard times. Many, like Guy's, draw a certain portion of their income from landed property. The depreciation in the value of land and the reduction of rents have told gravely on the income of Guy's and upon those similarly situated. That there is any prospect of land regaining its old value here may not be affirmed. It will never reach its old figure. Ready transit by rail from boundless inland areas once practically debarred from export by their distance from the seaboard has now enabled the up-country farmer to get his produce to market; means of preserving meat admit of the flesh of animals being brought from the farthest ends of the earth to the London markets.

All this is a heavy blow of permanent character to the British agriculturist, while a recurrence of bad seasons has exercised a most injurious, if temporary, influence upon the agricultural interest. Land-owners have been giving back heavy percentages of rent to their impoverished tenants, and of late have often been glad to let farms vacated by bankrupt tenants to those who would take them at nominal rents, or otherwise have had to take them in hand themselves in order to prevent their going out of cultivation. Land-owners are pinched, and are curtailing their expenditures on all hands. They cannot be in a position to subscribe freely to starving charities for a long time to come. Business, too, has been very slack for some time, and the subscriptions of commercial firms have been falling off. Until there is a revival of trade, there is no prospect of increased subscriptions from business firms. The only subscribers, almost, who are still in a financial position to continue their subscriptions in full are persons deriving an income from investments; and even all these are not without embarrassment. Still, practically they are but little affected by diminution of income. Another force is in action, however, in their case at present, which will tell grievously on their contributions to our existing charities. The fact is that, socially, we are almost at civil war in England. The conflict betwixt capital and labor, betwixt employer and employed, has recently been both widened and embittered. The womankind are dragged

into or have invaded the arena of conflict. The domestic of to-day is not what the domestic of five years ago was, as housekeepers know only too well. There is a distinctly aggressive attitude on the part of the wage-class which manifests itself painfully in the behavior of our domestics. There is the same perfunctory discharge of duty, the same punctilious assertion of rights, as is found in the present day in all ranks of life. The spirit of shirking is only too manifest everywhere. To discharge duties so as to draw the pay is the order of the day. To do anything above or outside the stipulated contract is not to be expected nowadays.

But there is something more in the attitude of the women of the wage-class. They are losing their self-respect, and with that many valuable elements of character. The number of respectable-looking women and girls now to be found in public-houses is appalling. In this matter the English women of to-day compare most unfavorably with their mothers and grandmothers. Self-respect kept decent women out of the public house up to a recent time, and to be seen in a tavern meant quite recently that a woman had broken away irrevocably from the more reputable section of her sex. Now no such line of demarcation is recognized. And, what is worse, there is other demoralization on foot. How comes it that legislation for the protection of the young is now so urgently demanded? Hitherto girls have been regarded as competent (with the help of certain social regulations) to protect their person; but now they must be protected by Act of Parliament. In a bill which is soon to be presented to our elected legislators, and which has already passed the Lords, the power to give consent as to her person is to be taken away from a girl till her fifteenth birthday. Hitherto after her thirteenth birthday a girl could give consent. But the early immorality of the present is such that old regulations are insufficient for present needs. A man may not abduct a girl until her sixteenth year, but she may absent herself from the paternal roof and lead a life of open immorality with impunity as soon as she has entered upon her thirteenth year. The Bishop of Peterborough put it straight when he told the story of a girl of fifteen who was living in a den of infamy. Her father consulted the authorities, who told him they could do nothing for him. The spiritual peer went on, "If the woman had stolen his spoons, instead of his daughter, he could have gone to the nearest magistrate and taken out a search-warrant and recovered his stolen property." So, as parents of the lower orders have lost the control over their daughters, the law has to come to the rescue. A few years ago the woman who detained in her brothel the child of an indignant parent would have stood a strong chance of being lynched, her establishment sacked, and the girl taken away by violence and restored to her parents. But the moral degradation which has been steadily progressing among the lower orders has removed all risk of such prompt measures being adopted. While the bishop made this appalling statement, an account appeared in the *Times* of a poor mother seeking her daughter in one of these dens of infamy, with the consequence that the keeper flung her down-stairs and broke her leg. She, poor thing, had no "lawful excuse" for being on his premises.

A lady writer in the daily press speaks of "the disgraceful stigma that at present rests upon England of being the land of wretched child-harlots." There is every reason to apprehend that by means of modern inventions the morality of girls in all classes, and most of all in the wage-classes, is being steadily sapped; with a further result that, passing themselves off for chaste when conscious that such is not the case, the girls of to-day are gradually growing in self-assertion and audacity. They adopt an attitude to their employers which is most offensive. This, of course, is most seen in our domestics, who come nearest to us, but it runs through the whole class. The consequence is that, with the waxing demand for domestics, as stated before, we in England are almost at civil war. Of course we have not yet reached the state which has become developed in the United States, and, what is more, we have no wish to reach it! But the friction is becoming so great that a strong feeling of antipathy is growing up on all sides, in towns and the country alike, betwixt mistresses and servants. The attitude of our domestics is tightly tying the purse-strings of charitably-disposed ladies, who have always been so far good upholders of our various institutions "supported by voluntary contributions." The prospects of such institutions are indeed clouded. Many of our hospitals have been of late dipping freely into their invested funds to meet a falling revenue. Indeed, King's College Hospital has almost exhausted its investments; and what will become of it no one can tell, the boldest speculator not seeing his way as to what will be the end of it all. So dire is its strait that last Sunday a young man, attired fantastically as a "forester," carrying a leather pouch, and bearing a pine staff (like a broomstick) with a green-flannel purse at the end of it, solicited coppers from the passing omnibuses at Oxford Circus,—whether with the knowledge of the authorities of King's College Hospital and the Temperance Hospital or not is unknown,—but there he was, and that was his plea. What with decreasing rents, lowered incomes, and the antagonism which is growing up betwixt mistress and servant cutting down the gifts of charitable ladies, our hospitals are falling upon evil days,—and this, too, at a time when the demand upon them is waxing keener and

keener. The present legislation about the franchise has led the House of Lords to decide that "medical relief shall disqualify the applicant as a voter." To accept medical relief from the state will deprive a man of the franchise, consequently the resort to charitable institutions, wherever they exist and are available, will be greater than ever. But with an increasing demand upon them, and a reduced income, what can these institutions do? It is quite clear that a change is coming over them, and that, too, before long. The old hospital will have to undergo some transformation to meet modern requirements, and the sooner the governing bodies begin to put their houses in order the better.

One thing is clear, and that is that the classes who resort to the hospitals must do something for their support. To a certain extent, the old hospitals must become self-supporting; and, then, how about medical teaching at them? The patient who pays may be in a position to protest against being utilized for purposes not strictly connected with his treatment. To be set up in order that a lot of youths eager for self-improvement may learn the signs of pneumonia may not be quite this patient's idea of justice to himself, and he may remonstrate, very naturally. What is to be done? The objection has been raised here already, and met with difficulty. With you it is a familiar matter, I am told. (A patient of mine recently at the hospital had been an inmate of a Chicago hospital not long ago. His attitude caused me to have him removed from my wards without delay.) Beggars must not be choosers; and if physical examination is still to be thoroughly taught, it will have to be done at the parochial institutions. The same may be said of pathology. And if these two great matters of medical education are taken away from the present teaching institutions, what remains will soon follow. It is abundantly clear the direction which things are taking at the present time. But what a revolution this will involve! Admitting that the medical superintendents of our sick-asylums are picked men (and many will well repay a series of visits paid with them when going their wards,—a matter in which I can offer my personal testimony), still, it can scarcely be claimed for them that they are competent to take up medical teaching, even if they had the time to devote thereto. The discharge of their own proper work is quite enough, without any teaching duties. The necessary consequence will be, that, if teaching is to be carried on at the national or parochial hospitals, arrangements will have to be made accordingly. What a revolution this will cause amidst the medical profession! If scientific teaching has to be conducted at a university, and clinical instruction be sought wherever it is to be had, the grand old schools of the metropolis, as well as their smaller and newer rivals, will have to look to their honors. They will return more or less to their primitive function,—the healing of the sick purely, with little connection with medical education.

If such changes be wrought,—and it seems most probable they will,—then the hospitals supported by voluntary contributions and helped by fragments from the patients will have to withdraw from their present proud position into humbler life. The man with the eye to the main chance will go where the student goes; and if the student goes to a parochial sick asylum, thither must he also wend his way. Then think of the patronage wielded by the Board of Guardians as to physicians and surgeons. To canvass a Board, instead of making friends among the staff,—will the choice be better or worse? To what extent will these honorary officers be under the rule of the Guardians, or, in other words, under the control of the rate-payers? Will the staff have more or less of their own way when they have to deal with the elected representatives of the rate-payers than with the chosen custodians of a private fund? What will be the effect of such radical change upon the material of the staff? The whole vista lengthens out into limitless space, with any amount of potentialities. Whatever may be the result as regards medical teaching, it is quite clear that a profound change will come over the dreams of our old hospitals. If medical relief disfranchises a man, all who value their vote will make friends with the private hospitals, will add their mite to that of the benevolent, and between the two keep the institutions afloat. But with paying patients will come a great change in many ways. And the outcome of all will be that what are now general hospitals will probably compromise with specialism, and so be enabled to keep themselves before the public.

But, however the problem of the future is to be solved, the large general hospitals as at present conducted will seriously suffer. It is to be sincerely hoped that the estrangement which is undoubtedly growing up betwixt mistress and maid will not widen into revengeful feelings which will dry up the well-springs of charity,—though of this perhaps the hope is almost vain. And the attitude of the impure products of enfeebled paternal authority in the streets exercises no corrective influences over the growing dislike on the part of cultured woman to the brazened venal Venus who jostles her on the side-walks. Social problems are always complex, and matters apparently without any connection are not unfrequently closely linked together in reality. The humbler classes must tone down their present attitude towards those in the higher social strata if they wish these latter to help them in their hour of need. To strike against their employer whenever an opportunity offers is scarcely the

way to encourage capitalists to engage in business involving the employment of many men. To allow their daughters to swarm on the streets, or as domestics to worry their mistresses out of their lives, is not just the attitude to encourage charity when the time has arrived that the entrance of a man's name upon the relieving officer's book for medical relief will cost him his vote. The day of trial to the institutions supported by voluntary contributions is near at hand, and those who benefit by them must be considerate to those who contribute to keep them up, if these institutions are to be maintained in anything like their present form.

J. Milner Fothergill, M.D.

BOSTON.

Mr. EDITOR,—The annual influx of medical visitors to our city has come and gone, and the hand-shakings and exchange of social and professional news incidental to the annual meeting of the Massachusetts Medical Society are over for another year. When one looks back a few years in the history of this Society, and recalls the low state of its financial exchequer, of its scientific work, and of its *esprit de corps*, and compares it in all these respects with the flourishing organization of to-day, he can but be struck with the change. The dead limbs have been trimmed off, and a vigorous new and healthy growth is to be seen.

The place of meeting, which the committee has arranged now for the third year, is particularly fortunate. The Massachusetts Institute of Technology, one of the soundest of our younger institutions of learning, has always manifested a warm interest in the medical profession, and has opened its doors most hospitably to receive us. Huntington Hall, the large auditorium of the building, capable of seating eight hundred or nine hundred persons, amphitheatrical in form, and admirable in optic and acoustic properties, has been used for all the meetings. The lower rooms of the building have been used for the exhibition of apparatus of various kinds, which is always made a prominent feature of our yearly gatherings.

The meeting opened June 9. In the morning the Fellows were made welcome at the Massachusetts General, the City, and the Children's Hospitals, where they made the visits with the surgeons and physicians in the wards, and afterwards witnessed some operations. The papers read at the sessions of this and the following day comprised the following:

"The Pathogenesis of Certain Affections of the Skin," by Dr. George N. Tilden, of Boston; "Consanguineous Marriages: their Effect upon Offspring," by Dr. Charles F. Withington, of Boston; "Labor complicated by Fibroids," by Dr. J. R. Chadwick, of Boston; "The Climatic Treatment of Phthisis," by Dr. Harold Williams, of Boston; "How a Lesion of the Brain results in Aphasia," by Dr. Morton Prince, of Boston; "The Relation of Insanity to Certain Nervous Affections," by Dr. Henry R. Stedman, of Boston; "Cremation in its Sanitary Aspects," by Dr. John O. Marble, of Worcester; "Diagnosis and Treatment of Occipito-Posterior Positions," by Dr. William L. Richardson, of Boston; and "The Influence of Ovariotomy on Surgery," by Dr. John Homans, of Boston. You may be struck by the number of papers furnished by Boston. Others have been so, likewise.

A very clever exhibition of obstetrical apparatus was made, in part by manufacturers and dealers, and in part by individual members of the Society, who contributed devices of their own invention and construction. A zealous specialist in pulmonary troubles brought on and exhibited Dr. Wilson's (of Brooklyn) Pneumatic Cabinet, wherein you can sit and have the air a little rarefied by an exhausting-pump, while by a mouth-piece is aspirated corrosive sublimate or other germicides to seek out and annihilate any stray bacillus which, unluckily for you, has found lodgment in your pulmonary alveolar spaces.

Dr. Henry I. Bowditch, known wherever thoracentesis has been practised, contrived an ingenious little exhibit to show the "evolution of the stethoscope." The first instrument of Laennec, made in 1816, was shown, and all its developments, in children, grandchildren, and collateral branches, down to the consummation in the double Cammann instrument of the present day. Among the series was the (at the time) new-fangled instrument belonging to Dr. Jacob Bigelow, with a plessimeter attachment, immortalized by Holmes in "The Stethoscope Song:"

> "The doctors being very sore,
> A stethoscope they did devise
> That had a rammer to clear the bore,
> With a knob at the end to kill the flies."

The Annual Discourse was given at noon on Wednesday by Dr. Franklin K. Paddock, of Pittsfield, and was upon the subject of antisepsis in surgery. He showed the natural tendency that wounds have to heal, and said that the antiseptic treatment owed its signal success to its removing all obstacles of decomposition, etc., which might impede that process. By antiseptic surgery many wounds that would once have been considered incurable have been successfully cured. The object of the address was to urge the adoption of this system upon the rank and file of the profession. In Germany it is demanded by the people, and in a recent case failure to employ it subjected a practitioner to suit for criminal negligence. Like Jenner's discovery of vaccination, its great practical value depends upon the universality and completeness of its application. Germs do not necessarily prevent the healing of wounds,

though their tendency is to do so. Putrefaction can be prevented by deterring the germs from entering wounds, and this is done by antiseptic treatment. The details of this system were then gone into, with emphasis upon personal cleanliness of the operator's hands and instruments. The various antiseptics were considered, especially four,—carbolic acid, corrosive sublimate, chloride of zinc, and iodoform. The difficulty of managing a spray in country practice was admitted, and means of replacing it were considered, with the conclusion that for most operations they could be relied upon, as the spray was not a *sine qua non* of antiseptic surgery.

Following this address came the annual dinner, at which some seven hundred Fellows sat down. Our Fellows include now some ten or twelve sisters, who during the last year have availed themselves of the opportunity granted them a year ago to become members on equal terms with the men. The "female Fellows" (in our inexperience we have hardly got a name for them yet) attended the meetings and the dinner in good relative form, and, despite the furious discussion that their admission called forth a year ago, were treated with courtesy and consideration on all sides.

The after-dinner exercises were presided over by Dr. Robert Amory, of this city, and among those who spoke were Dr. Charles D. Homans, President of the Society, Dr. Roosa, of New York, Dr. Walcott, late of the State Board of Health, Lunacy, and Charity (to whom I will return in a moment), Dr. H. W. Williams, Speaker Marden, of our State Senate, Hon. F. T. Greenhalgh, His Honor Mayor O'Brien, and others. The Mayor expressed his sense of obligation to the corps of physicians whom he had called in shortly after his inauguration into office to consult with the Board of Health as to methods of purifying the city from filth in view of the possible approach of cholera this summer. The police had been put at the service of this Board, and His Honor expressed the opinion that the city was never in a better condition to meet an epidemic of cholera than at the present time. He paid a high compliment to the work of the health officers in connection with the treatment of smallpox. The figures on this point are so striking that I cannot forbear quoting them. During the decade ending in 1850 there were 457 deaths from this disease; from 1850 to 1860, 762; from 1860 to 1870, 630; in the four years from 1870 to 1873, inclusive, 1100; and in the eleven years since 1874, only 26.

The strains of "Auld Lang Syne" brought the dinner to a close, and with the dinner ended the celebration of the one-hundred-and-fourth anniversary of our State Society.

Some years ago, three of our State Commissions were consolidated in one Board, known as that of "Health, Lunacy, and Charity." This was done against the protest of some of our ablest authorities on matters of public health, for the multiform duties of the Board were such as to give little hope that any individual member could make himself familiar with all its widely-differing duties. One by one the best men have dropped out of it, and the places have become in great measure political spoil, until now it is stated without contradiction that the committee on lunacy is entirely made up of men without any technical knowledge of the subject. Only two out of the nine members of the Board are practitioners of medicine at all. For the last few years whispers have been circulating that one of the departments superintended by this Board was not administered in the interests of morality, and after much delay the facts were brought to light and the offender removed. In all the thankless tasks which fell to his share as a member of this Board, Dr. Walcott, one of the two medical members, has been faithful to his duty and zealous for the public interest. His term has just expired, and he has failed to receive a reappointment. The enthusiastic reception which he received at the dinner when he was called to address so many of his professional brethren who knew that he had suffered for "righteousness' sake" must have been in the highest degree gratifying to him. One of the few good things that the old Board has done was to secure the passage of a law against the adulteration of food and drugs. Massachusetts is the only State which now enforces such laws.

A word further, suggested by the figures quoted above concerning smallpox. We have had this spring about half a dozen cases of this disease, apparently developed from three or four different sources. At least a careful study of the epidemic has failed to show any connection between that number of the cases and any of the others. Every case has been removed at once to the hospital at West Roxbury, which, far from being a pest-house in appearance, more nearly resembles an artistic suburban school-house. Here the policy of the city physician has been to give the patients, one and all, the most luxurious treatment at his command. The patients are given anything (in reason) that they ask for, and doubtless many of the poorer classes receive more dainties of food and drink than they ever saw before in their lives. But the desired effect has been produced. The quality of the accommodations and the treatment are pretty generally known among the lower classes of the city, and there is now no reluctance shown by any one who is taken with the disease to go there for treatment. Ignorance, prejudice, and fear, which formerly led to the concealment of the disease and thus imperilled a whole community, are now disarmed, and prompt information,

removal, and isolation have borne good fruit in the stamping out of an epidemic which might have attained formidable proportions.

C. F. W.

June 11, 1885.

PROCEEDINGS OF SOCIETIES.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Second Day.

THE report of the Committee on Medical Education being in order, the chairman, Dr. Jackson, of Philadelphia, reported a series of resolutions recommending that, with regard to the right to practise medicine, the sole power of granting a license to practise in Pennsylvania be vested in a single Board, which should have no connection with any corporation engaged in medical teaching; that the proceedings of the Board be a matter of record, open to public inspection; and that the medical profession should nominate to the Governor a list of persons qualified to perform the duties of the Board, from which he shall appoint the required number. It was further recommended that a committee be appointed to prepare, in accordance with the views of the Association, a bill to be presented to the Legislature incorporating the above resolutions. The discussion was long and spirited, but the resolutions were finally adopted.

Dr. Taylor, of Luzerne County, read a report of the recent epidemic at Plymouth, and this was followed by a paper from Drs. French and Shakespeare upon the same subject.*

The Nominating Committee presented its report, which was adopted:

The following were nominated for the respective offices:

President.—E. A. Wood, M.D., Allegheny County.

Vice-Presidents.—Hiram McGowen, M.D., Dauphin County; E. J. Russ, M.D., Elk County; A. H. Shaefer, M.D., Juniata County; C. C. Halsey, M.D., Susquehanna County.

Permanent Secretary.—W. B. Atkinson, M.D., Philadelphia.

Recording Secretary.—G. D. Nutt, M.D., Lycoming County.

Corresponding Secretary.—J. H. Musser, M.D., Philadelphia.

Treasurer.—Benjamin Lee, M.D., Philadelphia.

Additional Members of the Committee on Publication.—T. H. Helsby, M.D., Lycoming County; Edward Jackson, M.D., Philadelphia; G. W. Weaver, M.D., Luzerne County.

Members of the Judicial Council.—J. L. Stewart, M.D., Erie County; S. S. Schultz, M.D., Montour County; Henry H. Smith, M.D., Philadelphia.

* The substance of these communications was given to the readers of the TIMES in the last issue, p. 654.

Chairman of Committee of Arrangements for next Meeting.—T. H. Helsby, M.D., Williamsport.

Williamsport was selected as the place of holding the next annual meeting, on the first Wednesday in June, 1886.

The Address in Medicine was read by Dr. Edward T. Bruen, of Philadelphia.

Commencing with some remarks upon pathology and etiology, he said that in tubercular disease it has been established that a micro-organism, the bacillus of tuberculosis, is constantly present. The inoculability of the tubercular material from pure cultures has also been proved, and its causal importance is claimed by an increasing number of clinicians and pathologists. It is, however, a fact that healthy tissues can resist the inroads of the microbe: therefore an active constitutional predisposition or acquired ill health is a constant source of menace. But there also exist cases of abdominal tuberculosis without pulmonary lesion, and even cases with cheesy deposit in the lungs, in which the bacillus cannot be detected, however careful the search. These cases radiate foci of infection only through the lymphatic channels, and in this differ from a tubercular case in which the bacilli exist, for in the latter case the entire system may be involved. There also exists a form of interstitial phthisis known as pneumonokoniosis, or artisan's phthisis, in which the appearances are often very similar to the admittedly-tubercular forms, but which are minus the bacillus.

A very brief allusion was made to the subject of cholera. The opinion of its communicability by means of fluid media was warmly supported, and is proved by modern research,—the same argument applying as is used to explain the spread of diphtheria, which is a disease known to be communicable by fluid media as well as directly from individual to individual. Koch seems to have demonstrated a specific cholera bacillus, and the same demonstration of a specific microbic poison is sought by some for diphtheria. Possibly in both cases the exact poison is yet to be discovered.

The propriety of boiling the drinking-water is unquestionable; and certain disinfectants lessen the active force of the virus, as corrosive sublimate or the sulphate of copper. The free use of water in sewers, and the burning of the dejecta, were recommended.

In albuminuria, among the symptoms the importance of high arterial tension, when continuous, cannot be overestimated, since Bright's disease has two aspects, the renal and the cardio-vascular. The views of the late Dr. Mahomed upon this subject were cited,—viz., that acute or chronic blood-poisoning forms the first step in the process. This is followed by an increased arterial pressure, and consequently by functional hyperæmia of the kidney, the chief excretory organ of the body.

When high arterial tension is inaugurated, a chill, constipation, or an excessive amount of the poison may increase the hyperæmia to a more severe inflammation, and this gives rise to albuminuria by further impeding the circulation through the Malpighian tufts.

When the change is more chronic, albumen may be only occasionally present, and that in small amounts, but cardio-vascular changes produced by high arterial tension develop, the vessels thicken, and the heart becomes hypertrophied and its nutrition impaired.

Albuminuria may also occur by rapidly-advancing changes in the capsules until they strangle the vessels they contain, or the outer-lobular changes may be considerable, and bring about a like result by compressing the tubular plexus.

The real diagnostic question was, in each case, not, Is there albuminuria? but, Is the kidney doing well its functional work of elimination?—and the study of the heterogeneous elements of the renal secretion by the specific gravity and quantitative analysis is supremely important. The duration of cases of Bright's disease was considered as really much longer than is customarily thought, but no albuminuria can be physiological if persistent.

The causes of albuminuria not due to serious renal mischief were thought to coincide with the times of increased fulness of blood in the kidney, which is produced by general causes, such as effects of food and fasting, of upright posture as compared with the horizontal, the warmth of bed *versus* exposure of the surface, of exercise *versus* rest. Nervous forms of albuminuria may occur in young adults at puberty, due to excessive irritation of the genito-spinal centre with reflex cerebro-spinal symptoms. The common association of albuminuria with cases of ophthalmia is more frequently vaso-motor than due to renal disease; and Granville has shown that albuminuria can occur in elderly but intensely nervous persons, the force of irritation residing either within the cranium or at the cilio-spinal axis. Cystitis or gout may give rise to forms of albuminuria; and Granville was quoted as showing that there is no reason why, under the influence of nervous depression and vaso-motor disturbance, the kidneys should not become œdematous in the same manner as in an hysterical patient.

In testing for albumen, a preference was expressed for the heat with nitric acid and the picric-acid tests. The former will detect one part of albumen in from six thousand to seven thousand parts of urine. The ferro-cyanide of potassium and acidulated brine test will detect one in from six thousand to seven thousand parts of urine; also potassio-mercuric iodide, picric acid, and sodium tungstate, one in twenty thousand parts of urine. The picric-acid test was discussed at length, and methods of avoiding error described.

A review of the subject of the operative management of pulmonary cavities was given, and its proper scope defined. The recognition of pneumothorax was stated as being much simplified by using a silver dollar as a plexor and plessimeter, and then noting the clear metallic sound produced. This sign vanishes if an external fistula is produced or the internal opening is closed.

Some personal views were expressed as to the diagnosis of pericardial friction. Over the pericardium the sounds (*a*) are synchronous with the movements rather than the sounds of the heart; (*b*) they are superficial sounds, often accompanied by a fremitus; (*c*) change of posture modifies the murmur; (*d*) the alterations common to the walls of the heart in endocardial disease are absent.

The above were usually noted, but especial importance was laid upon the location of maximum intensity of a murmur in pericarditis which does not correspond with a valve-point. The pericardial murmurs also change their focus of maximum intensity very often.

In alluding to antipyrine, it was described as undoubtedly efficient as an agent to reduce the temperature, which continued to fall for about six hours after the exhibition of one or two doses. The objection to its use was the profuse, exhausting perspirations to which it gives rise, and it also produced a depressing effect upon the heart, though the latter is less than the depressant effect produced by others of the carbolic-acid series. The usual dose employed by the speaker was ten grains, as the strength of antipyrine is about twice that of quinine. Nitro-glycerin had been found valuable in lessening albuminuria associated with increased arterial tension, but its use must be watched, since it is possible that the reduction of arterial tension may be so great as to impair the cardiac power so essential to perfect circulation in renal processes, and thus albuminuria from feeble circulation would occur. Nitro-glycerin was also considered as very useful in renal asthma. Caffeine is a safe cardiac stimulant and diuretic. It is capable of increasing the force of the systole, but does not bring about a slowing of the pulse. The dose should range from eight to twelve grains daily. A peculiar fanciful delirium, like that produced by excessive amounts of belladonna, was described as an occasional symptom when caffeine had been used continuously. The mental equilibrium is speedily restored when the use of the drug is suspended.

Reference was made to the use of hyoscine. It had been shown by Dr. H. C. Wood, of Philadelphia, to be a safe cerebral and spinal sedative. The dose was about one-hundredth of a grain. The virtues of cocaine were commented upon, and the special applicability of the wine of coca in cases of chronic alcoholism and nervous prostration was discussed.

The address closed with some observations

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on dosage and the possible effects of small doses long continued, especially when remedies had been used as alteratives and tonics.

Dr. Henry H. Smith, of Philadelphia, read a paper "On the Non-Contagiousness of Cholera Asiatica." Cholera is a disease which, although well known in China two thousand years before the Christian era, and of which an uninterrupted chain of evidence has been preserved to the present day, is yet unsettled as to its exciting cause, there being a variety of opinions, differing in accordance with the stand-point of the observer.

The speaker stated that he had participated in the investigation and treatment of every epidemic of cholera in Philadelphia since its first appearance, in 1832, spent many hours in the post-mortem study of the intestines of patients dead with cholera, and had never suffered from this exposure. He stated that he was, from his own experience, convinced of the non-contagiousness of the disorder, and that most of the distinguished practitioners of a former period in Philadelphia—as Chapman, Horner, Hodge, Jackson, Condie, Coates, the elder Pepper, Wood, Goddard, and Neill—were also non-contagionists. After citing numerous European authorities of the same opinion, he quoted statistics furnished by Sir William Gull, of London, showing that in the epidemics of 1848 and 1865 the deaths from cholera in London were always greatest after pay-day among the working classes, this being largely due to the free use of alcoholic drinks, it being supposed that brandy was a preventive and panacea, while, on the contrary, its use was followed by a depression of the nervous system that predisposed a person to an attack. Alluding to the wide discussion of the comma-shaped bacillus of Koch as the exciting cause of cholera, the lecturer stated that there were many who doubted it, as it had never been proved to be capable of creating the disease in man, and that the results of Dr. Ferran's inoculation of comma-bacilli were discredited by the French Academy, and that there were opponents of Koch's views in the French Commission sent to Egypt in 1883 to investigate cholera, foremost among whom was Professor Strause, of Munich. He also cited Von Pettenkofer as recommending "the abolition of all sanitary precautions to check the advance of cholera as irrational, and like the posting of sentries to stop the burst of the monsoon," so well satisfied was he of the non-contagiousness of the disorder.

Speaking of Koch's address before the Imperial Board of Health at Berlin, the speaker said that it would doubtless surprise many to learn that Dr. Koch knew of no germicide for cholera, and that when asked as to the use of his discovery to the practitioner he replied, "It will put an end to the fearful squandering of disinfectants, and millions will not again, as in the last epidemic at Berlin, be poured into gutters and cesspools without the slightest advantage."

After this rapid summary of facts and opinions proving the non-contagiousness of cholera, the paper closed by stating that, whether this disease was or was not admitted to be contagious, it was all-important to the public health to observe strictly all the usual sanitary laws in reference especially to the purity of water, proper drainage and the removal of excreta, proper food and clothing, and the avoidance of fatigue by all engaged in attendance on the sick; and then if cholera should come this summer, which, judging by its past course, was very doubtful, it was not likely that the epidemic would be as severe as those through which so many physicians had practised and lived without undue anxiety.

A paper entitled "A New Method in the Treatment of the Alcohol Habit" was read by William F. Waugh, M.D., of Philadelphia.

The treatment of acute alcoholism is generally successful, but, except in a very few cases, the patient relapses into inebriation and finally dies a drunkard.

The disease is not, however, essentially incurable, for cases do sometimes recover permanently. The causes of the relapses are—

1. Previously-existing disease, which led to drink.
2. Overwork, especially when combined with illness.
3. Gastric catarrh, due to alcohol.
4. Catarrh of the mouth, due to the same cause. (This is the form which is popularly cured by using liquor as a gargle instead of drinking it.)
5. The depression due to the withdrawal of the accustomed stimulus.

In the first and second classes, the recognition of the cause affords the indication for treatment.

In the third class, the remedies recommended are hot water with soda before meals, oxide of silver, oxide of zinc or bismuth following, and minute doses of ipecacuanha to restore the secretion of the digestive glands.

In the fourth and fifth classes, the use of coca is recommended, in the form of a masticatory, to obtain the local effect on the mouth, as well as the constitutional effect in relieving the depression. The object is to substitute for the alcohol habit the harmless habit of chewing coca. The food should be carefully regulated, and should at first consist of raw oysters or beef, with capsicum and vinegar, pickled tripe or pig's feet.

If the patient pass the point when he still desires to be cured, and is unwilling to make an effort, he should be put under restraint,—preferably in an institution where he could be compelled to earn his livelihood instead of spending the time in enervating idleness.

Dr. Spencer M. Free, of Dagus Mines, read a paper on "Morphine in Cholera Infantum," in which the use of morphine was advocated in small doses in selected cases.

The Secretary presented a paper by Dr. A. Van Harlingen, on "Dermatitis Medicamentosa," which was read by title, in the absence of the author. (This subject is discussed by Dr. Van Harlingen in his "Report on the Progress of Dermatology" in the preceding number of this journal.)

Dr. J. V. Shoemaker, of Philadephia, presented a systematic and elaborate paper on the use of "Soaps especially Medicated in Diseases of the Skin," in which many new and reported useful combinations were proposed and discussed.

At the close of the afternoon exercises a visit was paid to the Lackawanna Hospital, on the invitation of the Board of Directors and the Medical Staff. In the evening the President, Dr. E. P. Allen, delivered the annual address, before a large audience, at the Court-House.

Third Day.—The Address in Obstetrics was read by title, as Dr. C. A. Rahter, of Harrisburg, who was appointed to deliver it, was absent.

Dr. John H. Packard, of Philadelphia, presented a new instrument for use after tracheotomy as a substitute for the tube. It was a skeleton wire instrument, modelled upon the general plan of the eye-speculum.

Dr. E. O. Shakespeare, chairman of Committee on the Communication from the American Medical Association relative to the appointment of State Examining Boards, presented a report recommending a reference of the whole subject to the Committee on Medical Education, which was adopted.

Dr. Charles Meigs Wilson read a paper advocating "Mechanical Dilatation of the Uterus" for many disorders which formerly were thought to need a serious surgical operation.

Dr. E. A. Wood, of Pittsburg, delivered the Address in Surgery, in which he strongly insisted upon the necessity of preliminary training for medical students.

Dr. Addinell Hewson, of Philadelphia, exhibited the electric light and explained its use in diagnosis.

Dr. Benjamin Lee read a paper entitled "*Nil Desperandum* in Spinal Caries."

He said, in substance, that there are two points that can never be too strongly insisted on in the treatment of spinal caries, or Pott's disease of the spine.

First. That it is *never too early* to begin with the employment of mechanical support of the most decided character; and, second, that it is *never too late*.

First. It is never too early. The disease is a surgical one, and must be treated surgically. To tamper with it by attempting to treat it medically, by giving tonics and anodynes, is both a crime and a blunder,—is as absurd as to try to treat a fracture of the thigh with Mrs. Winslow's Soothing Syrup.

The wearing of an artificial support, properly contrived, for a few months can do the patient no harm if the spine is not diseased, but neglect on the part of the physician to advise a resort to this means of treatment when such disease is present will lead to irreparable injury to the patient and a loss of prestige to the physician himself. The story will be repeated from house to house, and from gossip to gossip, how Dr. Langsam allowed Mrs. Goodmother's daughter to go on for a year with spinal disease, and never found out what was the matter till she told him herself. It is perfectly easy to recognize the disease long before any deformity shows itself. The principal signs are sudden attacks of cramping pain in the abdomen or sides, great stiffness on waking in the morning, and inability to stoop forward and touch the floor. There is not generally pain or tenderness in the back, and it is a great mistake to pronounce that there is nothing the matter with the spine because that symptom is absent. If the patient is able to walk, he will turn in one or both toes and hold his shoulders back and up rigidly. If an infant, it will scream on being moved and lifted. The disease often follows an attack of whooping-cough, and can even more frequently be traced to a fall or other injury.

Secondly. *It is never too late* to begin with the use of mechanical supports.

It is the greatest possible error to suppose that strength is needed on the part of the patient in order to bear the application of a surgical appliance. When the vital energies are slowly wasting away in consequence of a local source of irritation, the mechanical support is the plug which stops the leak. Without this, internal medication is as vain as the labors of the fifty daughters of King Danaus, condemned to expiate the awful crime of murdering their husbands on their nuptial night by filling eternally with water a vessel full of holes.

The following case amply illustrates the truth which the author wished to convey.

S. R. J., a boy 6 years old, was first seen by Dr. Lee January 7, 1884. He was suffering from spinal disease in the vertebræ of the neck, following whooping-cough two years before. The only treatment had been homœopathic globules given for supposed rheumatism. He was completely paralyzed from head to foot, was wasted almost to a skeleton, had a racking cough, breathed with great difficulty, and had so rapid a pulse that it could scarcely be counted. He screamed with agony on the slightest movement, and every touch gave him pain. The application of the brace was a task of great difficulty, on account of this extreme sensitiveness, but when it was once on he experienced an immediate sense of relief. One week later he

was eating and sleeping well, and could move the first two fingers of the right hand and the little finger of the left hand. At the end of the second week he could move his toes and put his hands above his head.

In three weeks more he had slight motion of the left leg. Two months from the time of the application of the support, which he wore night and day, he could hold up his head, and in three months more could walk alone.

Notwithstanding the formation of a large abscess in the neck, he has continued to improve in every respect up to the present time, and there is every reason to anticipate his entire recovery. This was simply one of the many cases which the doctor could cite to prove the truth of his second proposition; but one example would suffice.

Dr. G. G. Davis, of Philadelphia, read a paper describing the "Treatment of Palmar Abscess, Panaris, and other Inflammations of the Hand and Fingers."

Dr. H. R. Wharton, of Philadelphia, read a paper on "Osteotomy for the Correction of Deformities in the Lower Extremities."

Under the general remarks upon Osteotomy attention was directed to the two methods employed, the linear and cuneiform operation, and the preference given to the former where possible, as it consists in a simple section of the bone, and practically constitutes a subcutaneous operation, whereas the cuneiform operation, in which a wedge of bone is removed, necessitates an open wound, with its attending dangers.

The use of the osteotome or the saw rests with the choice of individual operators. The importance of making a full correction at the time of operation was insisted upon, especially if a fixed dressing be afterwards employed.

Among the causes which produce deformities for which osteotomy may be required are those arising from rachitis, from coxalgia, from badly-united fracture, or from unreduced dislocation, and of all these the vast majority of cases requiring operation are due to the first-named cause.

For the correction of angular deformities at the hip-joint resulting from coxalgia, Gant's modification of Adams's operation is to be preferred: that is, a section of the femur just below the lesser trochanter.

This operation is preferable because a section of the bone at this point secures its division at a locality where its structure is comparatively healthy; whereas its division through the diseased structures of the neck, if it still exists, is capable of renewing an active inflammation in tissues which are most susceptible to inflammatory accidents following traumatism.

Also, from the fact that the shaft of the femur can no longer be influenced by the action of the psoas magnus and iliacus muscles, the chances of correcting deformity are less when the section is made at this situation.

Adams's saw had, in the author's experience, formed a most satisfactory instrument, although some operators speak with equal favor of the use of the osteotome in performing these sections.

The fact that no case had resulted fatally in a large number of patients under the author's observation speaks well for the general safety of the operation. The results obtained as regards the correction of the deformity are most satisfactory. The various operations which had been devised for the correction of the deformity resulting from *genu valgum* were considered, and preference given to MacEwen's operation, which consists of a linear section of the femur made from the inner side just above the epiphyseal line. The ease of its performance, the fact that the section is made at some distance above the knee-joint, so that the articular surfaces of the bone and the ligaments can sustain no injury, and the satisfactory results as regards the correction of the deformity, are all advantages which commend it above the various other operations.

The various osteotomies for the deformity resulting from *anchylosis of the knee-joint* were considered: that devised by Mr. Borwell, a linear section of the femur just above the knee-joint, combined with a section of the tibia through its tubercle, had been found most efficient in correcting the deformity.

In *genu varum*, a linear section of the tibia, fibula, and femur with an osteotome at the point of greatest curvature has been found a safe and efficient means of correcting the deformity.

In *tibial curves*, a linear osteotomy at the point of greatest curvature, or, in very aggravated cases, a number of linear osteotomies, or the removal of a wedge of bone, may be required to produce the requisite straightening.

The use of the plaster-of-Paris dressing to fix the parts after the operation was strongly recommended.

Dr. O. H. Allis, of Philadelphia, made some remarks on "Dislocation of the Shoulder," and, explaining its pathology, gave reasons for a guarded prognosis as to its recovery of complete functional utility.

Dr. W. D. Kearns, of Pittsburg, exhibited an "Improvement in Splints for Fracture of the Forearm."

This invention relates to an improvement in splints for fracture of the forearm or wrist, especially for that kind known as "Colles's fracture;" and it consists in providing the splint with a peculiar retroflexion for the purpose of giving greater ease to the patient and efficiency in causing the parts to knit and heal in proper shape.

He said, "In experience I have found that in many, if not most, cases of fracture of the

forearm or wrist the splints should be applied so that the metacarpal phalanges of the hand may be bent upwards from the plane of the arm at an angle of about one hundred and twenty-two degrees, and that it should be left as free to move as possible. This is about the natural inclination of the human hand, or that in which the posterior muscular tendons are most completely relaxed, and the continued maintenance of this relaxation of the several tendons, fasciæ, and ligaments is of paramount importance in the class of fractures above noted.

"It is the purpose of my invention to secure these points of advantage, and especially to effect a ready and comfortable maintenance of the required muscular relaxation of the extensors and flexors to their insertion along the phalanges, and of the muscles and fasciæ of the hand and thumb.

"I will now describe my improvement with reference to the accompanying drawings.

"As will be readily understood by one skilled in the art of surgery, it is the form and flexion of the dorsal splint which governs the position of the hand, and when the retroflexion is of the angle before noticed the hand will naturally assume this normal and easy position.

"The purpose of the immediate flexion of the dorsal splint is to permit the proper backward bend of the hand and consequent relaxation of the posterior muscular tendons without tension or pressure on the carpal bones.

"My improved splints may be applied to the arm by bandaging or in any of the well-known methods, and with or without interosseous pads to control the displacing influence of the pronator quadratus and supinator longus, as may be convenient. If desirable, the dorsal splint may be terminated at or near the line, and the fore part of the fingers left unconfined.

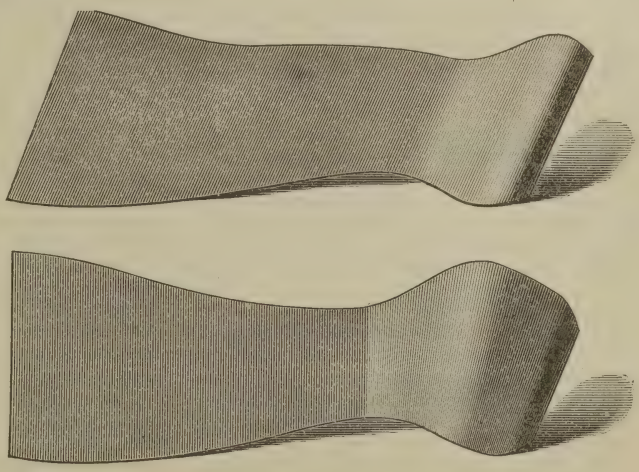
"The splints may be made of wood, hard rubber, tinned sheet-iron, zinc, or other suitable materials. Tin and zinc, though not always the best materials, are, however, the most convenient, because of the ease with which they may be bent to fit the arm and hand of the patient, and the readiness with which they may be procured in case of emergency.

"Having thus described my improvement so that others skilled in the art may manufacture and use it, my claim is:

"1. A dorsal splint for treating fracture of the forearm or wrist, having a suitable brachial surface retroflexed directly at the wrist, without substantial depression at that point, to extend over the metacarpal dorsal surface of the hand, at a retroflexed angle from the forearm, substantially as described.

"2. A palmar splint for treating fracture of the forearm or wrist, having a suitable brachial surface retroflexed beyond the flexors of the thumb and bent downward at or near the middle joint of the digital phalanges, substantially as described.

"3. The combination of a dorsal splint for treating fractures of the forearm or wrist, having a suitable brachial surface retroflexed directly at the wrist, without substantial depression at that point, to extend over the metacarpal dorsal surface of the hand at a retroflexed angle from the forearm, with a palmar splint made the substantial counterpart of the said dorsal splint, and provided with a retroflexed support for the palmar surface of the hand, substantially as described."



ENDORSEMENT OF FOREIGN DIPLOMAS.

Referring to the communication from the Lackawanna Society, Dr. P. D. Keyser offered a resolution which gave rise to some discussion, but was adopted. It declared it to be the sense of the Society that foreign diplomas requiring endorsement by colleges in this State could be properly endorsed only by the same kind of college, and that it is irregular to have homœopathic colleges to endorse a diploma other than that of their own school.

The President appointed the following gentlemen to read papers at the next meeting of the Association: In Medicine, Dr. J. V. Shoemaker, Philadelphia; in Obstetrics, Dr. R. Leonard, Mauch Chunk; in Surgery, Dr. H. L. Orth, Harrisburg; in Mental Disorders, Dr. John T. Carpenter, Pottsville; in Hygiene, Dr. T. M. Andrews, Philadelphia; and in

Laryngology, Dr. Charles E. Sajous, Philadelphia.

The Association was entertained at a reception and banquet given by the Lackawanna County Medical Society at the Wyoming Hotel on the 27th, which was a great success. After the close of the session an excursion was made to examine the mines in the neighborhood, upon invitation of the superintendent of the Delaware, Lackawanna and Western Railroad Company.

AMERICAN NEUROLOGICAL ASSOCIATION.

THE Eleventh Annual Meeting was held at the Academy of Medicine, New York, June 17, 18, and 19.

First Day, Afternoon Session.—Dr. Isaac Ott in the chair.

LOCATION OF A THERMAL CENTRE.

The Association was called to order by the retiring President, Dr. Ott, who spoke of the advance made by neurological science during the year, and then referred especially to the department in which he had been working,—viz., the determination of the centre for the control of the temperature of the body. Researches went to show that the temperature of the body was as much under the control of the nervous system as was the action of the heart. His own observations pointed to the anterior portion of the optic thalami as the location of this centre.

In the absence of the President-elect, Dr. Burt G. Wilder, the Vice-President, Dr. Leonard Weber, took the chair.

The reports of the Secretary and Treasurer, Dr. G. M. Hammond, and of the Council, were then read and accepted.

Dr. Mason's resignation as an active member of the Association was accepted, and he was elected associate member. Dr. Zenner, of Cincinnati, and Dr. A. M. Starr, of New York, were made active members.

On motion, a paper by Dr. C. K. Mills, entitled "The Brain of a Delusional Monomaniac who Killed Several Persons," was read by title.

Officers for the year 1886 were then nominated:

President.—Dr. C. K. Mills, of Philadelphia.

Vice-President.—Dr. V. P. Gibney, of New York.

Secretary and Treasurer.—Dr. R. W. Amidon, of New York.

Council.—Dr. George W. Jacoby and Dr. E. C. Séguin, of New York.

On motion, the Secretary was instructed to cast an affirmative ballot, which he did, and the chairman declared the gentlemen named elected.

A CASE OF CHRONIC MYELITIS, WITH RECOVERY.

Dr. A. D. Rockwell, of New York, read a paper with this title. The case was that of a girl, aged 16 years, whom he first saw in consultation September 2, 1884. Three weeks previously she had gone on a Sunday-school excursion to the sea-shore, and sat down on a rock. Soon she felt cold, and walked with difficulty, and during the night the limbs became completely paralyzed, and she lost complete control of the sphincters of the rectum and bladder; incontinence of urine was supplemented by a severe attack of cystitis and pain; a bed-sore formed over the lumbar vertebræ, two inches in diameter. For two months the patient was nourished almost entirely on milk and champagne. No improvement in the symptoms. There was some loss of sensation in the lower limbs. The faradic current had been used without benefit. Galvanism was then applied to the legs and lower portion of the spine, and for three weeks there was no apparent change except in a healthier appearance of the bed-sore. At the end of the fourth week very faint muscular contractions were observed, and at the end of the following week the characters of these could be distinctly made out to be those of degeneration. From this time onward the patient steadily improved, regaining power over the bladder more rapidly than over the rectum. Within two months there was complete control over the urine and fæces. Treatment was continued for four months, at the end of which time there was perfect recovery, excepting slight weakness in the flexors of the right leg. The case seemed to be clearly one of acute inflammation of the cord in the beginning, going on to degenerative softening or atrophy of the ganglion cells, the symptoms pointing to implication of the whole transverse area of the cord. The case was certainly very interesting with regard to treatment, four physicians besides himself having considered it hopeless, and treatment being persisted in only at the urgency of the girl's father.

Dr. E. C. Séguin said the case was an interesting one, and reminded him of several which he had seen of typical subacute poliomyelitis, the diagnosis being obscured by the weakness of the sphincters and slight dulness of sensibility. He believed that was all there was in this case; there was not absolute anæsthesia. He thought this case would come under the category of somewhat modified polio-myelitis, with some extension around the gray matter. It certainly could not be brought forward as an example of cure of myelitis transversa. It left our unfavorable prognosis of that disease unchanged. He referred to a case of apparent diffuse myelitis of the cord, principally of the anterior horns, seen with Dr. Delafield, the patient having completely recovered within three years. Dr. Rockwell's case was particularly interesting with regard

to treatment: while there had been time for spontaneous recovery, he had no doubt that galvanism had been of great service in expediting the cure.

Dr. Rockwell remarked that in this case there was complete paralysis of both the bladder and rectum. He had seen a number of cases of recovery from polio-myelitis anterior.

Dr. Starr asked with regard to the details of the treatment, and Dr. Birdsall asked with regard to the tendon reflex, and the distribution of the paralysis and of disturbance of sensation.

Dr. Rockwell replied to the questions asked, and said there was absolute loss of muscular contractility in all the groups of the muscles of the legs; the sensory symptoms were confined to the toes; there was absence of patellar reflex, which had now returned.

Dr. Gray, of Brooklyn, said it depended upon what was regarded as evidence of chronic myelitis as to whether or not a cure could be effected. After all, we knew very little about myelitis. We could diagnosticate a myelitis of the anterior horns, and of the columns of Burdach or locomotor ataxia, and we could diagnosticate myelitis of the lateral paraminal columns; but experimental and pathological observations went to show that there were many other columns in the cord which were functionally distinct from one another. Then with regard to what should be considered a chronic case, perhaps opinions would differ. According to his observation, recovery in chronic cases was not so rare as Dr. Rockwell seemed to think. He mentioned an instance of paralysis of the lower limbs in which over a year elapsed before recovery was established. Sometimes cases were quiescent for a period, when suddenly improvement would follow the use of electricity after failure of other agents.

Dr. Rockwell said that of course the exact pathological condition which existed in his case could not be decided positively, but it was very gratifying to observe the results, which were apparently due to the treatment.

NEW METHODS OF STAINING IN MICROSCOPICAL WORK.

Dr. Allen M. Starr was invited to read his inaugural thesis on this subject. He described the following methods, pointing out their comparative value, and presented microscopical slides illustrative of each: the hæmatoxylon method; the acid fuchsin method; Dr. Séguin's modification of the anilin blue method; Salis's double stain with methyl blue and acid fuchsin; and, lastly, the saffranin stain. Each method had its special advantages, but, on the whole, the first two named were the best. They were superior in all respects to the old carmine method.

The paper was discussed by Dr. Séguin and others.

ON THE USE OF OSMIC ACID IN PERIPHERAL NEURALGIAS.

At the evening session Dr. George W. Jacoby, of New York, read a paper on this subject, first reviewing the observations of Neuber, Eulenberg, etc. In all, about fifty cases of peripheral neuralgias had been treated by this method by different writers. Eulenberg had obtained very good results, there being, out of twelve cases, three cured, four benefited, five unaffected. Other cases so treated had given even better results. Dr. Jacoby used a one-per-cent. solution of osmic acid in water; of this, half a gramme to a gramme was injected. The acid should be dispensed only in a dark bottle, and a small quantity prescribed at a time. It caused a smarting, burning sensation when injected hypodermically, the pain generally subsiding after a few seconds. No constitutional symptoms were produced. There was sometimes puffiness over the seat of puncture. If various branch nerves were affected, it was necessary to make an injection over each branch, but the results were more likely to be beneficial if only a single branch were affected. Of a series of eighteen cases of peripheral neuralgia so treated, Dr. Jacoby gave the details of three. Of the eighteen cases, eight were cured and some others benefited. Sciatica seemed to present the better chance of recovery by this method, and the older cases seemed more amenable to treatment than the more recent, an observation opposed to that of a German physician. In one case hypodermic injection over the radial nerve caused pain to extend down the arm, and paralysis was present the next morning. It was true the patient had slept on the arm during the night, but Dr. Jacoby was inclined to attribute the paralysis to the injection of osmic acid, for French observers had noticed paralysis following injections of ether on several ocasions.

The conclusions drawn were that in osmic acid we have a remedy which is of service in certain cases of peripheral neuralgia; its action localized is frequently beneficial, but its use is not altogether free from danger: it is dangerous to implicate a motor nerve during the injection.

Dr. Sachs, by invitation, said that his experience with osmic acid in peripheral neuralgias had been only partially satisfactory. He had witnessed the treatment at the hands of Eulenberg, and believed that in about one-third of the cases no benefit whatever was observed. In some a cure was effected after failure by electricity and various other remedies. One point which he observed was that the injection caused no pain whatever. But Dr. Sachs's experience with the drug obtained in this country had been quite different, for it always caused severe pain on injection, and was liable even to give rise to abscess.

Dr. E. C. Séguin had used osmic acid in the

manner indicated, but he had had some experience with this general plan of treatment. He mentioned some cases in which treatment by injections of nitrate of silver or other agents had been more or less successful, and he was disposed to attribute the result to counter-irritation, perhaps by the excitement of an abscess. He had also caused paralysis of sensation of the upper lip by injections of chloroform for trigeminal neuralgia, and the same accident had occurred at the hands of a friend. He knew of no case in which motor paralysis had occurred.

Dr. Jacoby, in closing the discussion, said that he was not quite ready to accept the explanation of the benefit derived on the ground that it was a counter-irritant. Perhaps the fact that the nerve-tissue was changed in color in the living subject, as well as in the post-mortem subject, by injections of osmic acid would point to some other mode of action.

Second Day, Afternoon Session.—The President, Burt G. Wilder, M.D., in the chair.

REPORT OF TWO CASES OF SPINA BIFIDA CURED; ONE FOLLOWED BY HYDROCEPHALUS.

Dr. V. P. Gibney read the history of these two cases, one of which was reported in the proceedings of the New York Pathological Society last winter. In the second case, a child, the spinal tumor was injected with the 1 to 1000 glycerin fluid, and the tumor was thus caused to disappear entirely. After the cure the child died (of cholera infantum, it was said), and no post-mortem examination could be obtained.

ON THE USE OF STRYCHNINE IN NERVOUS DISEASES.

Dr. Gray, of Brooklyn, read a paper with this title, and said a paper read by Dr. Jewell, of Chicago, on the use of large doses of strychnine in certain nervous diseases, had prompted him to make observations in this direction. He had prescribed strychnine in many cases of myelitis, but only in two truly acute cases, in which the drug was not well borne. In one case of transverse myelitis the dose was increased from one-fiftieth of a grain up to one-twenty-fifth of a grain, and after four days, without warning, alarming symptoms of strychnine-poisoning developed, and it was difficult to save the patient's life. In one other case also alarming toxic symptoms developed after giving about an equal amount. In five cases of progressive muscular atrophy the strychnine acted as a stimulant, but no real improvement took place. The drug seemed to be of benefit in certain chronic cases; but he would never risk giving it in larger doses than one-twentieth of a grain. Dr. Jewell had recommended it even in one-tenth or one-eighth grain doses; but Dr. Gray regarded this as dangerous.

Dr. Dana had used large doses of strychnine in certain cases of neurasthenia with benefit, giving in a few cases nearly a grain of the drug a day, divided into three doses.

Dr. Séguin recommended the use of strychnine hypodermically, thus avoiding danger of the cumulative effects, or the collection of the drug in pills in the alimentary tract. He had used it in large doses in some cases, and in some it had effected a cure.

The President then read his address on

PARONYMY VERSUS HETERONYMY AS NEURONYMIC PRINCIPLES.

It was proposed to discard all vernacular names; to make a selection of the shorter technical, classical ones; to abbreviate some by omission of unessential words and others by substitution of prefixes for adjectives. The number of terms used in the different languages to express different parts of the brain amounted to more than nine thousand, while the necessary number amounted to little over five hundred. What the author proposed was, as far as possible, to have each part of the neuron or central nervous system receive a name consisting of a single Latin word, and that for each such Latin name there likewise be found or made an English equivalent —not a translation, but a paronyme; and, further, that in obtaining these names, Latin and English, due regard be had both to existing nomenclature and the established rules of etymological conversion. These Latin words and paronymes would be readily understood when they appeared either in Latin, Italian, Spanish, French, English, or German.

Third Day, Afternoon Session.—Dr. E. C. Spitzka read a paper entitled

THE RELATION BETWEEN THE SYMPTOMS AND THE LESIONS OF POSTERIOR SPINAL SCLEROSIS.

In his concluding remarks the author said, "While it must be admitted that the primary lesion of tabes is competent for each affected level of the root-zones and great horns to produce all the characteristic symptoms of tabes referable to that level, yet in the extent and distribution of the consecutive lesions we have valuable guides to the extent, severity, and duration of the primary disturbance, and we may attribute to the following special disturbances the ensuing degeneration of the tracts whose functions are abolished or diminished:

"1. That of the column of Goll, to the disturbance of muscular sense in the lower extremities.

"2. That of the comma-shaped initial bands of the column of Burdach, to the corresponding disturbances in the upper extremities.

"3. That of the triangular area bordering on the periphery of the cord and its posterior root entry, to the rarer analgesic development.

"4. That of the column of Clark and direct cerebellar tract, to the disturbed space sense."

The paper was discussed by Dr. E. C. Séguin.

A NEW NOMENCLATURE.

Dr. Burt G. Wilder then demonstrated a seldom-described artery (a. termatica), and made suggestions as to the names of the principal encephalic arteries. The artery referred to he found always to arise from the anterior or præcommunicant, and he also stated that the latter-named artery was often absent, the branches which it joined together being fused, and from within the fork so formed the artery termatica sprang.

Dr. Wilder also demonstrated two little-known cerebral fissures, and made suggestions as to fissural and gyral names. The first fissure was described only by Italian authors, the name in Latin being *fissura inflecta*. The second was the fissure called by Owen the basirhinal, and Dr. Wilder thought it had important morphological significance.

The next paper was entitled

TWO CASES OF FRIEDREICH'S DISEASE.

The author, Dr. Wharton Sinkler, of Philadelphia, being absent, it was read by Dr. G. B. Massey. The symptoms present in the two cases were nearly typical of Friedreich's disease, but were not congenital. There was no syphilitic history.

The paper was discussed by Drs. Séguin, Amidon, and others.

Dr. George W. Jacoby presented a galvanometer invented by Dr. Rondosch; and specimens of brain-section by Dr. Schmidt, of New Orleans, were exhibited.

Third Day, Evening Session.—Dr. E. C. Spitzka presented a brain-monstrosity found in a child which had reached the age of 2½ years. There were a number of deformities of the limbs, besides those in the brain, where there was an unequal development and limited displacement of parts.

Dr. Spitzka also presented specimens prepared after Gudden's atrophy method.

The President exhibited specimens illustrating the form and extent of the adult aula; the non-extension of the rima to the tip of the medicornu; the enlargement, yet complete circumscription, of the porta in an alinjected hydrencephal; the fimbrial revert and its relations to the prosoplex; the continuity of the diacœlian endyma from the mesial surface of the thalamus over the habena to the ditæle. He also presented specimens illustrating the extent of the insula or island of Reil in the porpoise, dog, chimpanzee, and man.

A CONTRIBUTION TO THE PATHOLOGY OF THE CEREBELLUM.

Dr. E. C. Séguin read a paper with this title, and related the history of the case of a man whose first symptoms appeared about 1857, and ten years later it appeared he had epileptiform or epileptoid attacks, headache, typical cerebellar inco-ordination, no distinct paralysis or ataxia, nystagmus, and increased patellar reflex. These symptoms remained stationary from 1871 until a short time before death (1885). Dr. Séguin made a diagnosis of disease, probably a tumor, of the superior cerebellar vermix. There was no history of syphilis.

The autopsy showed extensive atheroma of the cerebral arteries in patches, yellow in color, and of the type considered significant of syphilis. But this disease, he thought, could be excluded. There was a very considerable cyst of the superior vermix, extending at least an inch into the right hemisphere of the cerebellum, and pressing upon the floor of the fourth ventricle.

The paper was discussed by Drs. Amidon, Gray, Dana, and others.

Dr. Bauduy, of St. Louis, then read some

NOTES ON HYDROCHLORATE OF COCAINE.

The author thought this drug of special value in the treatment of melancholia, and also of other nervous affections. He administered it hypodermically in about one-grain doses. Its beneficial action on the melancholic was often almost miraculous and immediate. A cocaine habit, like the opium habit, was liable to be formed, and it would readily take the place of the opium habit. The antidote for the drug was morphine.

The Society adjourned to meet at about the same time next year, at the call of the Council.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held May 21, 1885, the President, A. Jacobi, M.D., in the chair.

OBSERVATIONS ON THE TREATMENT (MEDICAL AND SURGICAL) OF ACUTE PERITONITIS. BY T. H. BURCHARD, M.D.

The author said his object in writing the paper was to embody in a single article those questions which had proved most perplexing to him in the treatment of cases of acute peritonitis. He quoted statistics going to show that the death-rate in acute peritonitis is about fifty or sixty per cent., and is from twenty to thirty per cent. higher with the so-called idiopathic cases excluded. Believing that this mortality is unnecessarily high, he had thought it well to formulate the methods of practice already known, but which are not yet generally accepted by the profession.

The author considered his subject under the heads Causes, Natural Tendencies or Symptoms, and Mode of Death.

The causes of peritonitis are pretty well recognized: the rarity of idiopathic peritonitis is now generally admitted. According

to clinical and pathological observations, the causes of death are collapse and asthenia; but asthenia might be more intelligibly expressed by heart and respiratory failure.

The necessity for recognizing the cause of an attack of acute peritonitis in its incipiency, before the development of excessive tympanites, is evident. The diagnosis of a local lesion amenable to surgical treatment being demonstrated, surgical relief should be rendered at the earliest possible moment. Dr. Burchard referred to six fatal cases of peritonitis which had come under his observation and had already been reported, in five of which an autopsy demonstrated the correctness of the diagnosis of perforation of the vermiform appendix. Observation would justify one in making the statement that all foreign substances (solid, liquid, or gaseous,) of an irritating nature when introduced into the peritoneal cavity would inevitably and rapidly produce acute inflammation. If such an irritation existed elsewhere in the body, sound surgical treatment would indicate early removal. The same treatment is indicated, he thought, in the case of the peritoneal cavity. The words of Marion Sims, uttered in this hall a few years ago, pointed out the future treatment of these cases. The author referred to some experiments on the peritoneum and intestines of dogs going to show the tolerance of these organs to interference when proper precautions are observed. He also gave the condensed histories of a large number of cases of acute peritonitis in which surgical interference had been practised, and then gave the details of a case which occurred in his own practice, that of a colored man in whom there was omental abscess with agglutination of the peritoneum and intestines to the abdominal walls. The patient recovered from the operation.

Regarding the medical treatment, no drug is of greater service than opium; but it is often administered without a sufficient degree of discrimination. All cases do not develop gradually and show only slight constitutional disturbance. It was especially in the traumatic cases that there was shock and sudden collapse, and here, the vaso-motor system and the heart being affected unfavorably, opium, even in moderate doses, was poorly borne. In such cases the drug should never be administered without first carefully examining the heart, and guarding its effects by a combination with atropine and digitalis. Hypostatic pneumonia, which is so liable to occur in the progress of the case, might necessitate the administration of opium at only prolonged intervals. Regarding the quantity of the drug to be administered, respect should be had to the effect rather than to the amount. Dr. Burchard preferred the hypodermic use of morphine, as in this way one knew that he was getting the full benefit of the drug. Opium sometimes passes by the intestine without being absorbed. The tolerance of opium of patients suffering from peritonitis is well known, yet he had found that morphine administered hypodermically often produced its effects in comparatively small amount; but in one case it was necessary to give over sixty grains in five days, twenty-seven grains of the morphine being given hypodermically in the first twenty-seven hours of the disease. He gave with it one-sixtieth to one-tenth of a grain of atropine.

The advantages of the ice-coil were pointed out, also those of a diet of peptonized milk. If tympanites were due to gas outside of the intestine, aspiration would be of marked advantage; but he did not consider pneumatic aspiration of the intestine safe. It is possible for turpentine stupes freely used to produce kidney-irritation.

Dr. A. L. Loomis said he was not a believer in idiopathic peritonitis. He had not seen a case in which he was unable to find some constitutional or local cause for the disease. We might group all cases of peritonitis under three heads,—namely, those in which the cause is constitutional in the form of blood-poisoning, those in which the cause is extension of inflammation from neighboring organs, and those in which some form of perforation takes place, including traumatic cases. He had never seen a case of peritonitis recover which had owed its origin to an escape of intestinal gases into the peritoneal cavity. Peritonitis due to this cause he recognized as a very fatal form of disease. Dr. Loomis pointed out the difficulty which often exists of determining what part of the intestine is affected even in localized peritonitis, for the relative position of the abdominal contents might be altered from previous inflammations, etc. But if the commencement of the peritonitis could be determined with exactitude, he would heartily endorse all that had been said in favor of laparotomy. Where there is perforation of the vermiform appendix there often exists localized peritonitis and fixed pain, which is increased on pressure. There is also arrest of abdominal respiration, and feebleness of heart-power which does not correspond to the amount of pain or the apparent gravity of the disease. When such symptoms came on rapidly or suddenly, Dr. Loomis thought we were justified in resorting to surgery with the hope of saving the patient a fatal peritonitis, which was likely to occur. If an operation were not performed, or if the symptoms did not yet point positively to perforation, the physician should stand by his patient prepared to perform the operation when the first signs of perforation should appear. Dr. Loomis had on several occasions pointed out to surgeons the indications for the use of the knife in acute peritonitis. Experience had shown that the peritoneum is not such a dangerous membrane to invade as it had formerly been regarded. If, however,

general peritonitis had developed, if there was shock and collapse, pulse at 160, and the respirations altogether thoracic, then an operation offered but little chance of success. It was in the early stage that the operation should be done if one wished to give his patient the best chances of recovery.

Dr. Loomis believed thoroughly in the opium-treatment of peritonitis, but with restrictions such as had been pointed out in the paper. It had been a long time since he had adopted the custom of guarding his first doses of opium with atropine. Later on in the disease it was not so necessary to combine atropine with the opium.

Dr. R. F. WEIR thought that during the past ten or fifteen years surgeons had taken a long stride in advance in the treatment of diseases of the abdomen, and especially in traumatic cases. Dr. Loomis, he thought, had struck the key-note when he stated that there is no such thing as idiopathic peritonitis. Dr. Weir thought that in no case of peritonitis should the patient be allowed to die without receiving the benefit of an exploratory operation. He agreed with Treves, that there is no meso-colon leading to connective tissue behind the peritoneum; perforations always induce effusion into the peritoneal cavity. He called attention to the importance of earlier interference in so-called perityphlitic abscess. Surgeons should not wait until they are able to withdraw pus with the aspirator-needle, before cutting down and establishing drainage. In traumatic cases it is difficult to determine whether or not the patient is simply in a state of collapse, whether there is escape of the intestinal contents, or active hemorrhage. But the comparative safety of exploratory incision of the abdominal cavity justifies us, in such cases, in opening the peritoneum. He referred to the success of two operations under such circumstances,—one being performed by Mickulicz and the other by Kocher. He was entirely in accord with the author of the paper as to the importance of an early operation.

The PRESIDENT said it was a question in the mind of the general practitioner whether in every case of perityphlitis an early operation should be resorted to. He believed that we were not all fully prepared to operate at once, even though the diagnosis might be satisfactorily made, and for the reason that in a large number of cases the local inflammation did not extend. We knew of recoveries, too, in cases in which perityphlitis became a general peritonitis. For the general practitioner it certainly was a responsible position to take to decide the question whether an operation should be done at once, or whether we should wait for some time. He had met with just such a case within the last two weeks,—that of a boy, 15 years of age, who gave a history of perityphlitis,—there being sudden pain, local swelling in the right inguinal region, some dulness on percussion, slight elevation of the thigh, moderate amount of fever, absence of collapse. In such a case the question would be raised, Should an operation be performed at once? The patient was given morphine with atropine, and they applied ice constantly. The peritonitis became general, but the symptoms were not urgent. The temperature rose above 103° only once. There was pain over the abdomen, and thoracic respiration. He hesitated to recommend an operation, because the general condition of the patient seemed to justify a little more waiting. If in such a case death should occur, perhaps the physician might be reproached with not having proposed an operation.

The President heartily agreed with the statement that there were hardly any cases of idiopathic peritonitis. He was not prepared to say, even after the reading of this paper and hearing the discussion, that he would at once propose laparotomy in the class of cases mentioned. But he would propose it if peritonitis had set in suddenly after an attack of perityphlitis and extended very fast. Dr. Loomis had said to operate when the first sign of perforation made its appearance, but perforation was frequently the first thing which occurred.

Dr. LOOMIS thought he had said that the surgeon should be prepared to operate in all of these cases as soon as the evidences of perforation became known. He should beg to differ from the statement that perforation was the beginning of a perityphlitis. He mentioned a case in which he saw the patient on a Thursday, when there were localized symptoms in the right iliac region, not severe, but the facies pointed to some serious trouble. On Friday the patient felt well and got up, but on Saturday there was sudden collapse, and death occurred with general peritonitis. Autopsy showed lymph about the local trouble of two or three days' formation, and evidence of later perforation and general peritonitis. Had an operation been done at first, the patient might have recovered.

The PRESIDENT asked Dr. Loomis if he did not sometimes find at autopsies evidence of smaller perforations preceding a large one which was the immediate cause of death. In some cases the lesser perforation or minor degree of inflammation constituted the only attack, but in others there finally developed symptoms of perforation, collapse, and death. This much was true, that the post-mortem appearances varied so greatly in different cases as to constitute conclusive evidence that the cases must have varied clinically.

Dr. WEIR remarked that in speaking of an early operation he did not mean that it was necessary to resort to laparotomy, but to the ordinary operation for perityphlitis, with the insertion of a drainage-tube.

Dr. LOOMIS had stated at the beginning of his remarks that there was no cause of peri-

tonitis which was so fatal as the escape of the intestinal gases into the peritoneal cavity. He could understand how the vermiform appendix might be plugged at its opening into the intestine, and ulcerations occur farther on which might set up an inflammation in the connective tissue, give rise to hardening, etc., and recovery finally take place; but when the ulceration was situated near enough to the intestine to cause an escape of the intestinal gases, he could not see how it would be possible for the patient to escape acute general peritonitis.

Dr. BURCHARD, in closing the discussion, said he had seen six cases of perityphlitis attended by perforation, in five of which he had made a post-mortem examination and verified the diagnosis. It was a peculiar fact in these cases, and was commonly true, as had been pointed out in the discussion, that prior to the perforation which caused death there had been one or more attacks of perityphlitis, and that he considered a very strong diagnostic mark. If we should find a patient in complete or partial collapse who had had preceding perityphlitis, he thought we would be justified in concluding that there was perforation, particularly if there had been previous constipation and the patient had been taking an active purge. If there were but very little collapse, he thought we would be justified in concluding that if perforation existed at all it was so minute that it could not be diagnosticated. If the collapse were profound, as it is in most cases, and developed rapidly, he thought we would be justified in inferring that there was perforation.

MISCELLANY.

ANALYSIS OF SCHUYLKILL WATER.—Prof. J. M. Mallet, of the University of Virginia, Prof. T. G. Wormley, of the University of Pennsylvania, and Prof. William H. Greene, of the Philadelphia High School, by direction of City Council, are now engaged in making an analysis of the Schuylkill River water, which promises to be the most careful and thorough examination of the water-supply of Philadelphia that has ever been made.

DR. BURNEY YEO has been elected by the Council of King's College to the new chair of Clinical Therapeutics. The Council has acted wisely in establishing a chair of such character, in our opinion, and the school is to be congratulated upon having one of the most active workers in that field to fill it.

W. R. WARNER & CO., of this city, received the first premium at the World's Exposition, New Orleans, for uniformity and solubility of their sugar-coated pills. This is the ninth World's Fair prize which has been awarded to them, and attests their excellence and reliability.

STATE BOARD OF HEALTH OF PENNSYLVANIA.—The Governor has appointed the following to constitute the State Board of Health: Col. William Ludlow, Benjamin Lee, M.D., Joseph F. Edwards, M.D., Pemberton A. Dudley, M.D., of Philadelphia, E. W. Germer, M.D., of Erie, and J. W. McClellan, M.D., of Pittsburg.

A REUNION of the ex-resident physicians of the Pennsylvania Hospital was held at the Department for the Sick, Philadelphia, June 18, a reception having been tendered them by the superintendent, Mr. Richard Cadbury. The idea was a very happy one, and the occasion was so much enjoyed that it was decided to meet again to form a permanent organization next November.

NOTES AND QUERIES.

ERRATA.

IN the report of the American Climatological Association, page 798, the statement concerning the mortality from phthisis pulmonalis in 1857 should have been 39.50 (instead of 33.93) per *ten* thousand of all classes of the population. The statistics were taken from the Massachusetts *Registration Reports;* not from the State Board of Health Reports.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 7, 1885, TO JUNE 20, 1885.

MAJOR B. E. FRYER, SURGEON, U.S.A.—Ordinary leave of absence extended six months, from July 1, 1885, on surgeon's certificate of disability. S. O. 129, A. G. O., June 6, 1885.

The order directing MAJOR P. J. A. CLEARY, SURGEON, U.S.A., to change station from Fort Union, New Mexico, to Fort Lyon, Colorado, is revoked. S. O. 81, Department of Missouri, June 8, 1885.

CAPTAIN J. Y. PORTER, ASSISTANT-SURGEON.—Having been found incapacitated for active service by an Army Retiring Board, ordered to proceed to his home, and report by letter to the Adjutant-General of the Army. S. O. 136, A. G. O., June 15, 1885.

CAPTAIN CHARLES RICHARD, ASSISTANT-SURGEON.—Granted leave of absence for three days. S. O. 128, A. G. O., June 5, 1885.

FIRST-LIEUTENANT C. N. B. MACAULEY, ASSISTANT-SURGEON.—Relieved from duty at Fort Sisseton, Dakota Territory, and ordered for duty at Fort A. Lincoln, Dakota Territory. S. O. 61, Department of Dakota, June 5, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY DURING THE WEEK ENDING JUNE 20, 1885.

ARTHUR, GEORGE, PASSED ASSISTANT-SURGEON.—Granted leave of absence for one year, with permission to leave the United States.

DEANE, C. W., PASSED ASSISTANT-SURGEON.—Granted leave of absence for three months.

CLEBORNE, C. J., MEDICAL INSPECTOR.—As member of Medical and Naval Examining Boards, Philadelphia, Pennsylvania, June 22, 1885.

LIPPINCOTT, GEORGE C., PASSED ASSISTANT-SURGEON.—Detached from temporary duty, Naval Academy, and waiting orders.

MACKIE, BENJ. S., SURGEON.—As member of Medical and Naval Examining Boards, Philadelphia, Pennsylvania, June 22, 1885.

SHAFER, JOSEPH.—Commissioned an Assistant-Surgeon, active list, June 12, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 11, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON ARTERIAL EMBOLISM OF THE BRAIN.

Delivered at the Hospital of the Medico-Chirurgical College of Philadelphia

BY HUGO ENGEL, A.M., M.D.,

Professor of Nervous Diseases and Clinical Medicine.

GENTLEMEN,—The patient sitting before you, Chas. K., æt. 34, is a man in the prime of his age, of robust build, and apparently healthy. You will notice, as he gets up and walks around, a peculiarity in his step: he limps with his right leg. An examination with the dynamometer reveals the fact that his right arm also is affected: it is capable of exerting only half as much muscular power as the left, although the patient has always been right-handed. The cause of his limping with the right leg is, as he says, because he has in it a sensation of numbness, heaviness, and weakness. We have, therefore, here a case of hemiparesis. You will observe that there is no muscular atrophy, and, on testing electro-cutaneous sensibility and electro-muscular contractility, we find both normal in the affected extremities.

These facts point to a central nervous lesion, for, as you are aware, the pathological condition, in cases where hemiplegia or hemiparesis (the latter simply being a milder degree of paralysis, not so complete a palsy as the former) exists for some length of time without wasting of the tissues, and without any diminution in the electrical reaction, has its seat in the brain.

Three morbid states especially may give rise to hemiplegia of any duration. I purposely add "of any duration," for though at least in one of these conditions the hemiplegia may also rapidly disappear, this, as a rule, is characteristic of a fourth pathological state, which I do not care at present to discuss,—viz., hyperæmia of the brain. Severe attacks of cerebral congestion, if accompanied—as those of a high degree are apt to be—by capillary hemorrhage, also induce paralysis of one side of the body; but the palsy in such cases is so transient that it has generally disappeared ere the physician's arrival at the patient's house. As I said, there are but three morbid states to which the paresis could be ascribed in this case,—cerebral hemorrhage, embolism, and thrombosis. In the first, due to a diseased condition of the walls of the blood-vessels, giving rise to the formation of minute aneurisms, the affected blood-vessels burst, and the blood pours out, in smaller or larger quantity, over the neighboring brain-tissue; in the second, some solid particle enters the circulation in one of the ways characteristic of the formation of emboli, and is carried along until, reaching a blood-vessel whose calibre is too small to allow it to pass, it occludes the vessel; and in the third, a peculiar diathesis, producing a tendency to inflammation in the inner coat of blood-vessels and an inclination of the blood to coagulate, causes such a formation at the seat of the occlusion.

Before I endeavor to determine which of these three pathological conditions has caused the hemiparesis in this case, let me draw your attention to the main points in the differential diagnosis of these three lesions. I wish first, however, to remind you of the fact that there is not a single pathognomonic symptom characteristic of any of the three. Any sign usually met with in hemorrhage may be present in obstruction of cerebral vessels, whether the impediment be due to an embolus or to a thrombus, and any symptom frequently noticed in cases of obstruction may be the main—nay, the only—phenomenon in a case of hemorrhage. It was formerly taught—not so long since—that the so-called classical apoplectic attack (complete coma, stertorous breathing, etc.) always indicated cerebral hemorrhage, and that a permanent impairment of the mental faculties, if following the seizure, excluded hemorrhage and proved the existence of what was then termed softening. To-day we know that the group of symptoms formerly considered as belonging to the apoplectic seizure may be absent in hemorrhage, even if so abundant and severe as to cause the destruction of one whole hemisphere, and that it does not occur in full one-half of all the cases of cerebral hemorrhage, while it may be present in capillary hem-

orrhage, in embolism, in thrombosis, in opium-poisoning, and in several other diseases. With regard to the disturbance of mental faculties, modern science teaches that in no case, no matter how slight, of cerebral hemorrhage is this totally wanting; often it extends to complete imbecility, while in *softening*, now acknowledged almost always to be due to occlusion of cerebral vessels, the intellect may not at all suffer.

It is therefore no single symptom which can aid you in the diagnosis of any of the three cerebral maladies in question: it rather is the grouping of symptoms, each one of which may be present or absent in all three diseases. And ere you can be certain of the diagnosis, you must demonstrate to your satisfaction the presence of *all* the phenomena, of *all* the elements, that I am about to enumerate; but even then you may be mistaken, even then you will often have to console yourself with the old but only too true adage, "*Errare est humanum.*" Still, the following points will frequently be of great service to you, and, as a general rule, you will not be wrong in establishing your diagnosis upon their presence.

Cerebral hemorrhage is possible only when the walls of the arterioles are diseased and have become the seat of minute aneurisms. It is therefore a malady of advanced age, and is especially met with from the fortieth to the sixtieth year. After this period of life the tendency to the formation of minute aneurisms, and therefore to hemorrhage, again diminishes, as the ossification of the walls of the vessels, so characteristic of the last decades of individual human existence, prevents the yielding of the tissues. An attack of hemorrhage is always accompanied by a lowering of the temperature, 97° Fahr. being the usual record. Complete coma and stertorous respiration are present in about one-half of the cases. If death does not at once occur, after reaction has been established a period of inflammation follows, generally lasting only from one to three days. During this time there are to be observed more or less fever and increased temperature. At the end of this period the real injury becomes apparent, and hemiplegia, though visible during the seizure, can be unmistakably determined with reference to its limits, this form of paralysis being the most common, and one from which the patient may recover more or less completely. Intelligence and reason may or may not be greatly disturbed, and often the individual attacked never recovers his former mental powers. In such cases atrophy of the brain is the morbid state responsible for this deterioration of the mental functions. In cases where, due to a descending degeneration in the motor tract, permanent paralysis results from cerebral hemorrhage, contractures and rigidity are apt to make their appearance later, when the paralysis has become chronic.

Arterial embolism of the brain may happen at any age. This is of importance to know, as the fact also is worth remembering that embolism is specially frequent in young adults between the ages of 20 and 40,—at a period of time, therefore, when cerebral hemorrhage almost never occurs. Further, as a rule, the symptoms of obstruction of a cerebral artery by an embolus set in with lightning-like rapidity; warnings are rare. The attack may present the complete picture of the classical apoplectic seizure; there may be perfect coma and stertorous breathing, or these symptoms may be utterly absent. But when present they rapidly disappear; they never remain so long as, when present, they do in cerebral hemorrhage; the celerity with which they vanish is similar to that observed with regard to these symptoms in cases of cerebral hyperæmia accompanied by capillary hemorrhage. But, whether they are present or absent, the attack is characterized by a sudden stroke of palsy, which is seldom wanting. The paralysis usually assumes the form of right-sided hemiplegia, and aphasia is a symptom most frequently accompanying the stroke. This frequency in the occurrence of right-sided hemiplegia and of aphasia is due to the fact that the passage along the left internal carotid and up the Sylvian artery of the same side—the direct prolongation of the carotid—is the shortest and most direct road for an embolus from the heart to take. Then there must be present in the system a cause accounting for the formation of an embolus. In the majority of cases this is an organic valvular lesion of the heart, and vegetations or other morbid changes of the aortic semilunar valves probably give rise most frequently to such emboli. Occasionally also a heart-clot, being broken up, its torn

shreds carried along by the circulation, is responsible for the formation of an embolus. Particles of cancerous growth, especially when this is situated in the lung, may also enter the circulation, pass through the heart, and finally occlude a cerebral artery for whose calibre they are too large. A thrombus may thus produce embolism.

All these facts greatly assist in the diagnosis, and when, as often is the case, there is evidence of the existence of an embolus somewhere else in the organism, in some other blood-vessel in the body, the diagnosis of cerebral embolism becomes a certainty. But we should never forget that an individual suffering from an organic valvular lesion of the heart may also have an attack of cerebral hemorrhage. In such doubtful cases the temperature-record may be of assistance. In embolism the temperature generally ascends at once, and may reach a very high degree, while in hemorrhage, at least while the acute attack lasts, the thermometer always records a decline, and shows the normal height only just before reaction, or, in some very rare cases, a very great increase immediately before death. But under these circumstances a mild delirium is apt to accompany the increase in temperature.

Yet, if we remember that any or all of the symptoms met with in cerebral embolism or in hemorrhage of the brain may be present or absent in either of the two diseases, you will admit that a differential diagnosis at times is impossible. Should, however, a patient, having had a sudden and well-developed stroke of right hemiplegia, recover the full use of his limbs within two or three days, the suspicion before existing, that an embolus caused the paralysis, becomes a certainty, for there is no case on record where such a paralysis, following an attack of cerebral hemorrhage, had thus rapidly and completely disappeared, while in hyperæmia it vanishes as quickly as it came.

With reference to *thrombosis*, the diagnosis often is even more difficult. Still, as a rule, the following points, if present, will enable you to recognize the presence of a thrombus in a cerebral sinus. Certainly an embolus, as well as a thrombus, may obstruct an artery, a vein, or a capillary vessel; but I refer in this lecture only to arterial embolism and venous thrombosis, because these two are by far the most frequent forms of obstruction in the brain,* and because the consideration of the other varieties would make the subject too complicated.

When a patient, suffering from any of the causes which give rise to thrombosis, —as an injury to the head, caries of the internal ear, furuncles in the face or neck, bone-disease of the lower extremities or chronic ulceration of the same, phlebitis, etc.,—is seized with pyæmic symptoms, to which a marked disturbance of the cerebral functions becomes added, the supposition of a purulent inflammation of a cerebral sinus, leading to its occlusion, is warranted.† And if the external veins, which are in connection with the diseased sinus, evince the disturbance of circulation, the œdema, characteristic of such cases, the existence of cerebral thrombosis may be considered established beyond a doubt. It is well also to remember that the symptoms of a thrombus, like its formations, only gradually develop themselves, and thus indicate a point of differential diagnosis between thrombosis and embolism. Thrombosis accompanying cases of hydrencephaloid—the so-called thrombus of marasmus—cannot be positively determined, but the œdema of the forehead, formerly considered pathognomonic of certain forms of meningitis, generally is an indication of the occlusion of the longitudinal sinus by an inflammatory process. Thrombosis may develop at any age, but a peculiar change of the blood, as present in various cachexias and in some states of extreme debility, and feebleness of the heart's action, are the conditions most favorable to the formation of a thrombus.

After having thus explained to you the difficulty in the diagnosis of cerebral hemorrhage, embolism, and thrombosis, and having indicated to you the points which may guide you, I will apply the knowledge thus obtained in the endeavor to discover the lesion which has given rise to the complaint of our patient. I have already given you my reasons for considering the seat of the morbid lesion to be in the brain. The question remains, What is that condition?

I will now institute a careful inquiry into the history of the case. The patient informs me that he cannot give me a cor-

* Perhaps excepting capillary obstruction (by pigment) in chronic malaria.

† Ziemssen's Encyclop., Nothnagel, art. Brain, vol. xii.

rect description of his former life, as his memory has greatly deteriorated since his present illness. It is well, gentlemen, to make a note of this fact. His wife, who is present, states that she can impart to us the desired information.

Chas. K. had but few diseases in childhood. When a little over 21 years of age he married. At that time he was physically the picture of health. When 24 years of age,—ten years, therefore, ago,—he was attacked by acute articular rheumatism. When suffering about a week from this painful malady he was suddenly seized with an intense pain in the chest, difficulty of breathing, and a sensation as of impending dissolution. At the same time he became delirious. The doctor attending him pronounced the attack a heart-complication. It probably was endocarditis; for this disease, while frequently complicating the rheumatic malady, often simulates cerebral lesions. I have seen cases where the symptoms of the heart-complication were totally kept in the background, while the phenomena present seemed to indicate meningitis, or, in other cases, acute gastric catarrh.

But, to continue the history, the patient never completely recovered from this acute illness. He has since often suffered from dyspnœa, palpitation, and dyspepsia, besides frequent attacks of giddiness; but no other acute disease developed itself until about a month ago, when his present complaint began.

At that time, one day while at dinner, the patient had a peculiar tingling sensation, which suddenly attacked his right arm: the extremity felt as if fallen asleep. Soon after he experienced stiffness in the arm: it felt cold, and assumed a blanched look. Being frightened, the patient sent for a doctor, who, when searching for the radial pulse on that arm, discovered its absence. K.'s wife specially remembers this fact, as the physician at that time took pains to determine by inquiry whether this absence of right-sided radial pulsation was an anomaly known to K. The doctor admitted his ignorance regarding the morbid symptoms concerning the arm, but I shall later explain them to you. However, he instituted proper treatment, and by the following morning all pathological phenomena had left, with the exception of a slight stiffness, which yielded during the course of the next twenty-four hours.

But two days after the occurrence just mentioned the patient once more was about to sit down for his noonday meal, when a tingling sensation similar to that which two days before had attacked the right arm suddenly seized the whole right half of his body and just as suddenly left, but only to return the very next moment. At the same time, as he later told his wife, he felt as if a shock from an electrical machine was passing through the right side of his body, but scarcely had he been aware of this sensation when he lost all recollection of himself. His wife, however, who just then was placing a dish on the table, noticed that he slowly glided down the chair and then fell prostrate to the floor. She was greatly alarmed, but impulsively took hold of a glass filled with water and threw its contents in his face,—probably the very best thing that she could have done under the circumstances. In an instant he came to, and she aided him to a lounge. When he regained consciousness, which he had momentarily lost, he felt confused for a long time, and afterwards, when he tried to explain to his wife what had happened to him, though he felt as if he could do so, he could not find the words; he had lost the memory of articulate language. On the physician's arrival, the patient's inability to talk being discovered, K. was asked to write down his sensations, when it was noticed that he could not do it, the memory of the symbolic signs for writing having disappeared, as well as that of articulate language. Slowly, however, the faculty of speech and of writing returned, and by the end of the first week he could once more express himself both ways, although not quite so well as formerly. Certainly by saying "not quite so well" I refer only to the mental act, and not to the hieroglyphs which, instead of letters, he produced in the beginning with his left hand, on account of the motor paralysis in the right arm. He also made the observation that his memory had greatly suffered by the attack, and that he had lost the use of his right arm and leg. His wife says that during the attack and for about a day longer the left side of his face had looked as if contorted by grimaces. This was probably due to the fact of the right side of his face being paralyzed. Let me here tell you that the mistake is often made, in these cases, of considering the healthy side the affected

one, for the paralyzed side appears smooth, while the normal half seems distorted from the augmented play of its muscles, they being held in check no longer by their antagonists on the opposite side.

The facial palsy, therefore, if it existed, rapidly passed off; the paralysis of the extremities also slowly improved, but has never totally disappeared, as you may still notice the impediment in their muscular actions, of which I gave you a proof in the beginning of the hour.

The history is complete, and it alone enables the physician to diagnosticate the disease beyond a doubt. Let us once more enumerate the main symptoms as they appeared, and group them together in such a manner as at once to guide you to the correct diagnosis. But to complete all the elements in the case, a physical examination will be necessary.

I find the cardiac apex impulse visible outside the mammary line, nearly reaching to the axillary and as low down as the seventh rib; during systole the whole region of the heart is raised. These signs of excited circulation are also noticeable in the large blood-vessels of the neck. Placing my hand over the cardiac region, I feel a distinct vibration mainly over the aortic valves. On percussion, I find the area of dulness greatly increased in all directions, beginning in the second interspace and extending downwards to the seventh rib; it passes over the mammary line nearly two inches on the left side, while on the right of the sternum the dulness is also clearly demonstrable. While percussing, I also detect dulness over the manubrium sterni. This is caused by the dilatation of the arch of the aorta, so frequently noticed in these cases. But although the impulse is increased in strength, it has not quite the heaving characteristic of the earlier stages of valvular lesions. Considering the area of dulness, the impulse and the pulse at the wrist, which latter does not at all correspond to the strength of the *choc*, we are entitled to make the diagnosis of dilated hypertrophy, as far as concerns the muscle of the organ. The hypertrophy therefore commences, in this case, to cease to be compensating; the organ has entered upon the stage of exhaustion, which, if the individual live long enough, is bound sooner or later to attack the heart suffering from valvular lesions. Auscultating the organ, there is plainly perceivable a murmur with its point of greatest intensity at the base, and appearing during diastole. It is clearest and loudest at the right side of the sternum, near the junction of that bone with the third rib. This murmur is propagated along the aorta, and, placing the stethoscope at the back near the left scapula, the murmur becomes even more distinct than anteriorly. The first sound of the heart is clear, but short. A murmur is also heard over the carotids.

The diagnosis, therefore, of the heart-disease is regurgitation of the semilunar valves of the aorta. One more evidence in its favor is the condition of the radial pulse: you feel that the artery, scarcely filled by the blood-current, again becomes empty by the receding wave. This pulse is called by the French, after the physician who first minutely described it, *pouls de Corrigan*.

We have here a patient suffering with aortic insufficiency. There is therefore present one of the causes which may give rise to an embolus. Besides, the original complaint has been in existence for many years, and the heart has reached that debilitated state which, if combined with a morbid condition of a valve, and especially of the aortic, is prone still more to favor the development of a clot (vegetations) on the valve, and to produce emboli; but they do so more during the earlier stages of the compensating hypertrophy, when the greatly-increased force of the circulation at times tears off one of these vegetations and carries it forward.

The clinical history is as follows. The patient, suffering with one of the causes inducing embolism, one day is suddenly seized with symptoms denoting the occlusion of the main artery in his right arm. These phenomena, however, rapidly disappeared,—a proof, to me, that the occlusion itself was caused by a coagulum easy of absorption. For there is no evidence of a collateral circulation having been established while the subclavian or the axillary artery was occluded; on the contrary, the history of the case points to a sudden stoppage of the onward flow of the arterial blood, and to the removal, a few hours later, of the impediment which had caused the obstruction.

Two days later the patient is again seized by an attack indicating a sudden interference with the circulation, but this

time the impediment lodged in the brain. He still is young, having not yet reached his fortieth year. He becomes unconscious, but this loss of consciousness is only momentary, and when he regains it he discovers that he is paralyzed on the right side of his body, and that he suffers from aphasia and agraphia, and from impairment of his mental faculties. The symptoms refer the lesion to the left cerebral hemisphere, and there to a district supplied with arterial blood by the Sylvian artery of that side. This group of symptoms is the one most common in cerebral embolism, as, for reasons mentioned at the beginning of this lecture, an embolus coming from the heart is generally apt to travel up the shortest and most direct path, and, following the course of the left common carotid, passes up the left internal carotid, and finally occludes the Sylvian artery — the direct prolongation of the carotid — or one of its final branches.

Some of the symptoms rapidly disappeared, while others, after the lapse of four weeks, still continue, although in a milder degree. From what I first told you, there is no doubt that the attack was due to arterial embolism in the left cerebral hemisphere. Let us now look for a moment at the various morbid conditions which may develop in a case of embolism of this kind in the district whose arterial blood-supply has been cut off by the occlusion.

What used to be considered softening of the brain due to inflammation we now believe to be the consequence of occlusion of cerebral vessels, either by an embolus or by a thrombus. Three forms of softening, the white, yellow, and red, were formerly recognized, and many conflicting explanations of the circumstances were given under which each of these states developed itself. Our present knowledge enables us to give a more lucid and correct explanation.

If a cerebral artery be suddenly occluded by an embolus, one of three conditions will set in, if the collateral circulation be not so rapidly established as to cause the disturbance to pass off without having produced any morbid change. The conditions are the following:

1. The instant the artery is occluded, the circulation in the district involved at once comes to a stand-still, and complete anæmia develops itself, followed by simple necrobiosis of the parts, which become degenerated, undergo the usual retrograde metamorphosis, and are finally absorbed, or a cyst forms very similar to the one often observed as one of the ultimate sequelæ of cerebral hemorrhage. Or,—

2. As soon as the embolus closes up the artery, the blood contained in the latter flows back to the next open branch, and is thence carried along by the circulation and brought directly to the main vein of the district, where it stems the downward current of the venous blood, and thus a condition of venous hyperæmia is produced. If, then, the individual lives longer, the congestion gradually ceases by absorption; the affected district assumes a paler hue, and in that condition resembles that at once developing in the state of anæmia first described. It also ultimately undergoes the same retrograde metamorphosis mentioned as taking place in the first instant.

If anæmia followed by necrobiosis sets in, the brain has a blanched appearance. It is the state formerly called *white* softening. When venous hyperæmia attacks the district deprived of its supply of arterial blood, the brain has a yellowish look, corresponding to the former *yellow* softening. When, in consequence of absorption, the morbid tissue passes from the condition of venous hyperæmia into that immediately induced in anæmia, it also assumes a whitish tint, and then also presents what has been described as *white* softening. The latter may, therefore, be the morbid alteration at once developing in cases of arterial embolism, or it may be the second stage of venous hyperæmia or yellow softening.

3. In cases where the circulation is still more active, where the force of the blood-current is still greater, immediately after the occlusion of the artery by an embolus the blood in the obstructed vessel, following the law of gravity and the suction-power exerted by the force of the current passing along the next open branch, flows backward to that branch, and thence also directly passes over into the main vein of the district. But the force with which it is propelled is so great that, arrived in the vein, this arterial blood not only stems the downward venous current, but drives it back, and the now mixed arterial and venous blood performs a retrograde motion in the main vein, which return-movement continues

until the equilibrium of circulation is re-established,—*i.e.*, until the blood-pressure is the same as that of the healthy neighboring parts. In consequence, however, of this forced backward flow an intense hyperæmia develops itself,—so intense that the walls of the capillaries yield, and capillary hemorrhage complicates the congestion. It was this presence of the extravasated blood-corpuscles which once gave rise to the erroneous idea of inflammation as the cause of this softening. The affected district in this condition presents a more or less dark reddish hue, corresponding to what used to be termed *red* softening. If death does not at once take place, the coloring-matter of the blood is gradually absorbed and the tissues assume a yellowish look,—they enter upon the state of yellow softening; and if the individual live long enough, the same condition as described in anæmia and as mentioned as the second stage of yellow softening — viz., white softening—ultimately develops itself, to be finally followed by the same subsequent retrograde metamorphosis that I explained to you as the last consequence of the anæmic state.

To use old, familiar terms, whose synonymes in modern pathology you now know, we have in arterial embolism of the brain either white softening or yellow, followed by white, or red, succeeded first by yellow and then by white softening; and, if the individual live long enough, in all these cases ultimately the usual retrograde metamorphosis which is the sequel of long-continued anæmia.

The later symptoms of cerebral embolism will depend altogether upon the artery occluded and upon the morbid changes developing in the affected district. As a natural consequence of the fact that the artery of the Sylvian fossa is most frequently the seat of an embolus, as also of the fact that, with rare exceptions, the districts deprived of their supply of arterial blood entirely lose their functions, disturbances of the mental faculties are the rule in cerebral embolism. But just as it was wrong to teach, as a point of differential diagnosis, the absence of mental decay in hemorrhage, it would be an error to assume that every case of occlusion of cerebral vessels must be followed by deterioration of the intellect. Some mental disturbance is always present in cerebral hemorrhage, and but few well-pronounced cases of this disease ever totally regain their former intellectual vigor, while in embolism cases are often observed where not the least mental disturbance happens. In hemorrhage the loss of intellect, often leading to imbecility, is due to cerebral atrophy; all cases of softening of the brain, with but few exceptions, are caused by occlusion of cerebral vessels produced either by emboli or by thrombi.

Regarding the prognosis in our patient, the collateral circulation was not at once established, but in the centres of speech it soon returned to the norm, though another explanation for the disappearance of the aphasia may be admitted. Some contend that in cases of this kind, when the centres of speech (or, indeed, the functions of any one district) on the left side are permanently destroyed, the same convolutions on the right side are capable of performing the duty of the injured parts. Whether this theory is correct or not I am not prepared to say. In our patient the injury in the motor sphere has evidently been of such a character as to produce a permanent lesion, for it is well known that if the paralysis due to cerebral embolism has not disappeared within four weeks after the acute attack, it will never totally pass off.

When speaking of the prognosis in this case, we must also not lose sight of another danger threatening our patient,—viz., that from fresh emboli. The underlying disease of the heart cannot be cured. The same circumstances, therefore, that have twice favored the formation of an embolus may again occur. To prevent them is probably impossible, and, to confess the truth, we are nearly as powerless to improve his present condition. The only chance to guard against the recurrence of such attacks, and to ameliorate the paresis and the slight mental deterioration at present existing, will be found in the strict attention to general hygienic rules. The patient should lead a very regular and quiet life: all his secretions and excretions ought to be scrupulously maintained, the diet be carefully regulated, and some tonic treatment be instituted. The heart must be specially watched, and any threatening debility be counteracted by the internal administration of digitalis and by judicious stimulation. Occasionally the carbonate of ammonia may be added to the digitalis.

Aside from its stimulating properties, it is said also to lessen the tendency of the blood to coagulate. Change of scene and climate—travelling, therefore—has often wonderfully improved the intellectual faculties in cases of this kind. The paresis will be best remedied by manipulation and Swedish gymnastics: at least I have seen in these cases a better result from massage than from electricity and hypodermic injections of strychnine, both often succeeding in establishing a cure in cases of paralysis due to other morbid lesions.

Baths and luxurious meals should be particularly avoided. There are many cases on record where, after a bath and during or immediately after a heavy dinner, cerebral embolism occurred. Anything tending to disturb the action of the heart, be it only an overloaded stomach, augments the danger already permanently existing.

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ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF NEUROLOGY.

BY G. BETTON MASSEY, M.D.

PROGRESS in a special field of medicine may be of two kinds: either the rescuing of a truth from chaotic confusion, or the general adoption of facts already established. For the appearances of the preliminary indications of an advance of the latter type neurologists have recent cause for congratulation. A distinguished gynæcologist has most openly avowed his conversion to the belief that a large proportion of gynæcological practice has to deal with

NEUROTIC MIMICRY OF UTERINE DISEASES.

In a recently-published clinical lecture,* Prof. Goodell acknowledges the failure of those ultra-local views of most cases of such affections as dysmenorrhœa, amenorrhœa, menorrhagia, granular erosion, intermenstrual ovaralgia, prolapsed ovaries, coccygodynia, etc., so widely distributed throughout gynæcological literature by the teachings of the school led by the late Marion Sims. So broad, indeed, is the departure of this favorite teacher from the surgical methods of treatment of these cases now so unfortunately prevalent, as the result of such pathological views, that he does not scruple to characterize them as a "moral rape," and adopts entire the views and methods generally known as having been introduced by Weir Mitchell. Neurologists look with satisfaction on this wholesome change in gynæcological practice, and can predict only good results as a consequence.

The general practitioner, especially, cannot too soon recognize the influence of the nervous system in the production of the symptoms often attributed to uterine disease. In the intimate and imponderable action and reaction of the mind and body it may be at times difficult to determine with certainty just where the trouble starts; but, start wherever it may,—in the digestive, the cerebral, or the nervo-sexual groups,—it is certain to involve the general nervous organization in a more or less profound functional distress before presenting the simulated symptoms of uterine disease.

It is clearly the duty of the true physician, when consulted, to probe deeply into this first cause (whether digestive, mental, sexual, or external to the individual), and, after ascertaining its true character, to secure its banishment if possible; but not the less is it then his duty to consider the nervous system of his patient as in need of repairs and to adopt positive measures of reparation.

Notwithstanding the considerable prevalence of the combined therapeutical measures known as the "rest-cure," but little has been added to the literature of the subject beyond the publications of the talented originator. It is undeniable, however, that current thought and investigation tend largely towards the centric theory of others than the class of nervous disturbances grouped around the convenient term neurasthenia, and farther away from the older views of nerve-perturbation from excentric irritation. That the average truth lies largely in a middle ground of belief will doubtless be conceded by many observers, especially those who possess frequent opportunities of therapeutically tracing different cases of an apparently similar character to totally different sources. The obvious conclusion is that we should be equally alive to the possibil-

* Medical News, December 6, 1884.

ity of our patient presenting a condition of general dystrophy traceable to the central nervous system, and thence to an individual or group of bodily organs acting as the original *fons et origo mali;* or, on the other hand, presenting a condition of general dystrophy with especially accentuated symptoms in some particular organ or organs, but entirely dependent on some unexplainable deviation or depression of the functional activity of the central nervous system. Under the latter circumstances, however, much mystery may at times be removed from the etiological question of the case by a careful inquiry into the habits of the individual in that broad sense which includes his whole relations to the external world. In ninety-nine cases in a hundred some failure will be found in his thorough adaptation to conditions which are presumed to be natural and proper because time-honored.

In connection with this subject it is interesting to note that the attention of another class of observers has recently been called to some facts that tend to show

THE NEUROTIC ORIGIN OF BRIGHT'S DISEASE.

Here, however, having very patent and positive pathological changes in the affected organs to explain, equally positive organic changes in the nerve-centres have been traced and a most reasonable causative relation suggested. The researches of Drs. Da Costa and Longstreth* on the state of the ganglionic centres in Bright's disease are not only most important contributions to the study of that affection, but point to similar possibilities in other diseases, of extreme value if established. These observers reported a careful microscopic examination of the renal ganglia in nine cases of more or less chronic nephritic disease. Decided changes were found in all, and the cases were, for convenience, divided into three groups.

In Group I. the most striking alterations of the ganglia were found, the two cases forming the group being also the most pronounced examples of the chronic contracted kidney. The microscopic appearances of the ganglia indicated fatty degeneration and atrophy of the ganglion-cells, with breaking down of their substance into granules and fatty globules, rendering the nucleus obscure. The connective-tissue substance of the ganglia had apparently passed through the active stage of hyperplasia, and was undergoing a contractile process similar to that usually seen in the kidney. The tissues outside the ganglionic masses showed a contraction of the same character, and there was unusual accumulation of fat in the neighborhood of both the ganglionic masses and the kidneys.

Group II., consisting of three cases of contracting kidney, showed a lessened amount of change both in the kidneys themselves and in the ganglia. The ganglionic cells were found markedly degenerated, but to a lessened degree as compared with the first group. The difference in the two groups was more pronounced, however, in the differing condition of the connective basis-substance of the ganglia. Here the appearances indicated a far more active hyperplasia of the connective tissue, which condition had evidently passed away in the first group.

Group III. was made up of four cases of a more acute type of catarrhal inflammation of the kidney. The changes in the ganglia were less marked, but sufficient alteration existed to correspond with the interstitial changes in the kidneys.

The conclusions as summed up by the authors will be sufficient apology for this allusion to the subject here.

1st. That in Bright's disease, especially in the contracting kidney, there exists a constant lesion of the renal plexus.

2d. That while this lesion might be looked upon as forming part of a general process of degeneration in connection with the kidney-disease, we think it is the cause of the renal malady and precedes the degenerative changes.

3d. That the diseased condition of the ganglia furnishes the clue to the alterations of the vessels of the kidneys.

4th. That similar changes producing similar results may exist in other ganglia; for instance, in the cardiac plexus, explaining the hypertrophy of the heart.

Of less general interest, except as a curiosity, is the alleged malady known as

THOMSEN'S DISEASE.†

This has been so named by the Germans after the observer who has not only pre-

* Amer. Journ. Med. Sciences, July, 1880.

† Union Méd., Paris, 1883, xxxvi. 905; also Arch. de Méd. et Pharm., Paris, 1884, iii. 179, and translation in Canada Lancet, Toronto, November, 1884.

sented the most careful study of the subject, but was himself a sufferer from it. Without any known pathology, the disease is manifested by *spasmodic inhibition of the initial acts of automatic or volitional motion.* The observed cases seem to predominate among soldiers, whose accuracy of drill is thus interfered with. This being so, it can readily be seen that our professional brethren of such military countries as Germany and France have opportunities for its study quite beyond any now possessed on this side of the Atlantic.

The cases related include a discharged soldier who was unable to open his fist when he had shut it; when reading, he was often unable to follow out the lines; the movements of the tongue were impeded; dancing and running were prevented. A recruit is mentioned who, in spite of his earnest efforts, was a desperation to his drill-instructors, because of the slowness and sluggishness of his motions in the execution of orders given him. Another soldier, at the command "March!" remained immovable, as if rooted to the ground, subsequently succeeding in rejoining his comrades after sundry disordinate movements of the arms and legs; he was absolutely unable to run, and if he persisted in the attempt he fell; the muscles of mastication, of the tongue, and of the arm were both in-coördinate at the beginning of motion and weak. A case mentioned by Westphal, after a fit of sneezing, could not open the eyes without great effort, and while eating could not always shut his mouth when desired. Other cases are related in which the cramps were not constantly liable, but only followed severe fatigue, continuing several days.

It is stated that there is no pain experienced by the sufferers, but that the contractions are accompanied by a feeling of tumescence of the affected muscles. The muscles are apt to show an increased development, but there is no corresponding increase in power. In all other respects the individuals were in the possession of normal health, no evidence of organic disease being found.

Decided heredity was exhibited in most of the cases, in that of Thomsen thirty-five members of his family being affected with the disease. Of thirteen children of his mother, seven were found to present it.

Hypotheses have been presented by various writers localizing the disease in the medulla, in the cord, in the peripheral nervous system, and in the muscles themselves. The affection is looked upon as incurable.

FRIEDREICH'S DISEASE: HEREDITARY ATAXIA.

A case of this rarely-recognized affection was recently shown to the Philadelphia Neurological Society by Dr. Wharton Sinkler, and notes of another case occurring in the practice of Dr. S. Weir Mitchell were read. Both cases had been for a time under the care and observation of the writer, in connection with the gentlemen mentioned, and their study suggested the probability of this condition being not infrequently mistaken for other forms of sclerosis: hence the propriety of a brief summary in this place of the principal facts so far gathered.*

As distinguishing hereditary ataxia from the more ordinary form of posterior sclerosis, the first feature of importance to be noted is the tendency of more than one member of a family to be attacked by the rarer disease. The relationship may be that of parent, grandparent, or other member of a previous generation; but the more usual occurrence is to find members of the same generation attacked. Another fact of importance is the youthfulness of the subjects of Friedreich's disease, ordinary tabes being most emphatically a disease of middle life. An absolute integrity of sensation may be noted as a third and most important distinction, the lightning pains, constrictions, numbness, delayed sensations, true anæsthesias, and other sensory disturbances of tabes being conspicuous by their absence, with rare exceptions.

The first symptom of this disease is almost invariably ataxy of the lower limbs, a slight awkwardness and clumsiness being for some time the only warning. This becomes worse until decided irregularity of gait exists, and will then most likely be associated with "Romberg's symptom," or static ataxy,—*i.e.*, inability to stand with the feet together and eyes closed. The ataxy of the legs soon spreads upward. In many cases the arms have been attacked very soon after the legs, or at least within a year or two, though in some cases from four to eight years have elapsed.

* For a fuller account, see a critical digest in *Brain*, April, 1884, p. 105.

A true ataxy of speech is the second symptom of importance. This is difficult to describe, but it may be understood somewhat when it is stated that it is a product of ataxy of articulation alone, with no evidences of an involvement of word-memory, or aphasia. The speech is apt to present a sort of drawl that is suggestive of mental impairment; but this suspicion will be found, on further examination, to be quite unjust to the patient. This symptom may manifest itself either simultaneously with the ataxy of the arms or not till many years afterwards. A late phenomenon may be nystagmus, which is bilateral, usually transverse, and is observed only when the patient fixes or follows an object. Patellar tendon reflex is absent. Lateral curvature is frequently present.

Other symptoms than these evidences of an impairment of the co-ordination arc may present themselves, though the various ataxies mentioned are the most striking and common. By a synchronous involvement of the gray matter and lateral columns we may find anæsthesias, paralyses, and contractures. The cases of Drs. Mitchell and Sinkler presented marked evidences of contracture of the extensor muscles of the limbs below the knees; a peculiar attitude of the feet somewhat resembling equinus was thus produced, with the first phalanges of the toes strongly extended and the remaining phalanges passively flexed. The electrical reactions are normal.

The morbid anatomy presents systematic sclerosis of the whole extent of the posterior columns. It is interesting to note that in a number of instances the cords examined were undersized and apparent examples of deficient development.

SOME STATISTICS OF HEPATIC DISEASES.

AN ANALYSIS OF ALL THE CASES PRESENTED TO THE PATHOLOGICAL SOCIETY OF PHILADELPHIA FROM 1857 TO 1881, INCLUSIVE; WITH A DETAILED STUDY OF THE FATTY, THE CANCEROUS, AND THE CIRRHOTIC LIVER.

BY J. H. MUSSER, M.D. (UNIV. OF PENNA.),

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THE collective method of studying disease, so much in vogue at the present time, can be resorted to in the study of pathological anatomy by utilizing fully the careful records of the past as well as by waiting for the opportunities of the future. Such studies, however, must be confined to the period which includes the employment of the instruments of precision of the present day.

The writer has been interested for some time in the study of hepatic disease. He had occasion to review all cases of such nature that were reported to the Pathological Society of Philadelphia. The following pages are the result of this study. It embraces not only an analysis of cases of actual disease of the liver, but also a study of the relation of various diseases of the economy to the hepatic structure. The period of time included in these studies is from the foundation of the Philadelphia Pathological Society, in 1857, to the publication of the Transactions in 1881, including the volume of that year.

In the various reports to the Society the condition of the liver was recorded four hundred and thirty times,—one hundred and eighty-four times as normal, and two hundred and forty-six times as having undergone some pathological change. The following classifications show the various affections causing death in which the liver was found to be normal. The first division of the table shows the cases in which hepatic disease would not generally be expected, the second the cases in which hepatic disease is frequently found:

TABLE I.—*Causes of Death, Liver Normal.* (*Total Number of Cases*, 184.)

	Disease or Condition.	No. of Cases.
a.	Accidents and acute inflammatory disease	47
b.	Aneurism and atheroma	11
	Carcinoma of various organs	37
	Tuberculosis and phthisis	21
	Continued fevers	14
	Bright's disease	7
	Gastric ulcer	6
	Ulceration of intestines, including rectum	6
	Organic heart-disease	5
	Pyæmia	5
	Stricture of the pylorus (fibroid)	5
	Cirrhosis of the pancreas	3
	Ovarian disease	2
	Cerebral and renal embolism	2
	Cerebral softening	2
	Cerebral tumor	2
	Cerebral abscess	2
	Addison's disease	2
	Hodgkin's disease	1
	Syphilis	2
	Diabetes mellitus	1
	Purpura hæmorrhagica	1

Now, it was found that not all the cases that were reported and would be classified under subdivision *a* yielded normal livers. In truth, the cause of death being accident, etc., in many cases the liver was found diseased. In other words, hepatic disease was present, not recognized during life and not a secondary condition of the primary disease causing death. The second table briefly indicates the relative frequency of the various forms of hepatic change under these circumstances.

TABLE II.—*Causes of Death Accidental or Acute Disease; Liver Abnormal.*

Disease.	No. of Cases.
Fatty degeneration	15
Congestion	8
Cirrhosis	3
Nutmeg congestion	2
Total	28

It was impossible to analyze these cases, to show the conditions of life previous to the accident, etc., which caused death, which conditions were no doubt the cause of the hepatic disease.

The first table is worthy of fuller study. It is seen that there are many instances in which secondary hepatic change of some kind would be expected, such general or local disease being present. It would be of interest, therefore, to compare the hepatic changes in the more prominent of the primary hepatic conditions in order to show their relative frequency. For this purpose the third table was constructed:

TABLE III.—*Relative Proportion of the Normal to the Diseased Liver (and the Form of Disease) in Various Affections.*

	No. of Cases.	Liver Healthy.	Fatty.	Cirrhosis.	Congestion.	Amyloid Degen.	Anæmic.	Pigment.	Red Atrophy.	Abscesses.	Gumma Syph.	Sec. Cancer.	Tuberculosis.
Carcinoma	83	37	10	4	1	...	...	...	...	...	...	31	...
Phthisis	53	21	18	1	...	2	1	1	...	...	...	...	9
Organic heart-disease	36	5	9	8	13	...	...	...	1	...	...	...	...
Pyæmia	10	5	1	...	...	...	...	...	...	4	...	...	...
Syphilis	10	2	...	2	1	...	...	...	...	...	5	...	...
Bright's disease	28	7	11	7	...	2	...	...	...	...	...	...	...
Fevers	23	14	6	1	2	...	...	...	...	...	...	...	...
Gastric ulcer	8	6	...	1	...	..	1	...	...	...	...	...	...
Ulceration of intestines	10	6	2	1	...	...	1	...	...	...	...	...	...
Diabetes mellitus	4	1	1	2	...	...	...	...	...	...	...	...	...

A closer study of the elements of Table III. presented many features of interest; and, first, the relation of carcinoma to hepatic disease will be considered. The following table shows the relation of hepatic change to the original seat of the disease:

TABLE IV.—*Relation of Hepatic Alteration, and its Absence, to the Seat of Cancer.*

SEAT OF DISEASE.	No. of Cases.	Secondary Deposits.	Normal Liver.	Fatty.	Cirrhotic.	Congestive.
Stomach	32	12	14	5	1	...
Pancreas	9	4	2	1	2	...
Intestines	7	1	4	2	...	...
Uterus	7	1	4	2	...	...
Œsophagus	3	...	3	...	...	...
Bladder	3	...	3	...	...	..
Kidney	2	...	2	...	...	...
Peritoneum	4	1	3	...	...	...
Breast	4	3	1	...	...	...
Suprarenal capsules	1	1	...	...	...	...
Mesenteric glands	1	1	...	...	...	...
Parts outside portal area other than breast	10	7	1	...	1	1
	83	31	37	10	4	1

It is at once observed that the ratio of infection of the liver to non-infection is as about five to three, while the ratio of the infected and the healthy livers is almost equal. We would expect, therefore, secondary hepatic carcinoma in about thirty-seven and one-half per cent. of all cases of carcinoma. It was noted that in all cases of secondary metastasis to this organ other glands were involved. The cases were too few to affirm the frequency of metastasis without hepatic involvement. Thus, the liver was normal in three instances of cancer of the stomach and one of the œsophagus in which lymphatic glands were secondarily infected. Remark, too, the frequency of infection from sources outside of the portal area,—one-third of the secondary carcinomas being from that source (breast included). On the other hand, it is seen in what a large proportion of cases of carcinoma within the portal area the liver is not infected.

So infrequently was the variety of malignant disease mentioned that it is scarce worth while to estimate the ratio of metastasis of the many forms. It was learned, however, that the encephaloid carcinoma was more frequently deposited in the liver, the scirrhus next, the epithelioma next, and the colloid the least frequently.

The Liver in Phthisis and Tuberculosis.—Fifty-three cases of phthisis are recorded

in which the state of the liver was mentioned. Phthisis and tuberculosis are taken together, as it is assumed that the former is tubercular. One example of probable non-tubercular phthisis is included,—fibroid. Twenty-one times the liver was found healthy. One-half of the number had gland-involvement, and six of these were examples of general tuberculosis. Of the remaining half, in four the tubercles were diffused in both lungs or other organs, six were localized to one lung. In nine cases the liver was the seat of tubercular deposit, and the same deposit was found to be universal; especially was glandular infection pronounced. It is thus seen that the liver is more likely to remain unaffected when the process is localized, and still more likely to remain so if the lymphatics escape the infiltration. Continuing the series, eighteen times the liver was fatty, twice the seat of amyloid disease, and once each cirrhotic, anæmic, and pigmented. The pigmentation in the latter instance was a coincidence, as it was due to associated malarial disease. The cirrhosis was due to the habits of the patient, and so was also coincident.

Organic Heart-Disease.—The following will show the serious changes which take place secondary to this disease. In fact, there is no other organic disease in which the proportion of healthy to diseased liver is less than in this affection. Five times the liver was normal; nine times it presented the appearance of nutmeg-congestion; four times of ordinary congestion. Nine times it was fatty; eight times cirrhotic; once it had undergone red atrophy.

Pyæmia.—Liver healthy five times; fatty once; the seat of metastatic abscesses four times. In three of the five instances in which the liver was healthy, the lungs were the seat of a purulent deposit. Once only were the liver and lung both affected. Thus each organ is liable to purulent infection an equal number of times, while the ratio of non-involvement to involvement of the liver is as six to four. It is worth adding to these observations that in the two cases of ulcerative endocarditis reported the liver was noted as congested and softened, and in the same number of cerebral abscess as normal, there being other purulent deposits and capillary emboli in the former cases and capillary emboli alone in the latter.

Syphilis.—The relation of this disease to liver-disease cannot be truly expressed by the knowledge derived from the Society records. Thus, twice the liver was healthy, twice cirrhotic (intemperance combined), once congested, and five times the seat of syphilitic gummata, in ten cases of syphilitic constitution or history reported. The proportion is too high for the gumma, and hence, as it was impossible to cull every record for a syphilitic history, the statement must be received with allowance.

The Relative Frequency of Liver-Disease.—This is shown by the following table, and well represents the proportion in this climate.

TABLE V.—*Relative Frequency of Alterations of Hepatic Structure.* (*Total Number of Cases*, 246.)

Variety.	No. of Cases.
Fatty	80
Carcinoma	41
Cirrhotic	38
Congestion	24
Congestion, Nutmeg	13
Abscess	13
Tuberculosis	9
Syphilitic gumma	5
Hydatid disease	4
Rupture of liver	3
Hemorrhage into liver	2
Pigment liver	3
Amyloid liver	2
"Diseased" liver	3
Leukæmic, "atrophied," red atrophy, chronic hepatitis, cavernous angioma, myeloid tumor, one each	6

The various accounts of the cases and the anatomical and histological appearances were so interesting that it was thought a more extended analysis of some of the more important diseases would be of some value. I have, therefore, carefully studied in this way the three most important classes,—the fatty, cancerous, and cirrhotic cases,—the results of which will appear in the second part of this paper.

FATTY LIVER.

Fatty degeneration and fatty infiltration will have to be included in the following summary, as at no time were they separated in any individual report. It is presumed, however, that a fatty infiltration alone was present in those cases in which obesity was an accompaniment; and, as a table is presented showing the proportion of cases in which diminution or increase of

the adipose tissues accompanied the liver-change, there will be no necessity for further reference to the question. The liver was noted as fatty, without any other change, at least any pathological change that exceeded the fatty, eighty times. As the liver was examined four hundred and thirty times in all, it will be seen that about nineteen per cent. had undergone this change. Again, in two hundred and forty-six cases of liver-disease fatty degeneration was found in nearly thirty-three per cent. of all the cases. But then in secondary carcinoma, cirrhosis, and other pathological states the liver was also fatty, and unless this degeneration be due directly to the primary change, as in advanced cirrhosis, etc., in reckoning a percentage the frequency under these circumstances should be included. Thus, in cirrhosis of a slight degree the liver was decidedly fatty three times, in carcinoma of a similar degree eight times, raising the percentage slightly.

The causes of fatty degeneration, predisposing and exciting, will next be considered. And first as to the *age* of the patients. Arranging the cases in decades, we find that the frequency of occurrence is least at the extremes of life. The age of the patient was not given in ten of the cases, thus limiting the number analyzed to seventy. The following figures represent in their order the frequency in each decade respectively, beginning with the first,—3, 3, 10, 14, 13, 14, 9, and 4; total, 70. When it is remembered that the causes of fatty degeneration are more distinctly operative in the middle period of life, it will not be wondered at that the extremes are found so barren. It is interesting to study the age in connection with these causes. Without going into detail at present, we may say that in the first four decades tuberculosis or phthisis was the chief etiological factor eighteen times out of thirty. The well-known cause, intemperance, occurred eight times in forty-one cases, in the fourth, fifth, and sixth decades. As age advanced, tuberculosis gave way to carcinoma as cause, and was found nine times in the sixth and seventh decades.

Sex.—In one case the sex was not given. In the remainder the male sex was noted forty-seven times, the female thirty-two. In the early decades—first, second, and third—the sexes were of equal frequency. In the fourth, fifth, and sixth periods the males were largely in excess (twenty-eight to thirteen). In the last two periods there were nine females recorded to four males. Studying sex in relation to cause, it was found that in the cases of carcinoma the females exceeded the males, in organic heart-disease the males the females; in phthisis the former were slightly in excess, while the cases in which fatty degeneration of the liver was due to the habits of the person were largely male.

Habits.—In nineteen of the cases the habits of the patient were given: in three of them as good, in sixteen as intemperate. Of the sixteen, the habits were considered as the exciting cause in ten; associate disease, together with the habits, in the remainder of the cases. Occupation had scarcely anything to do with the development of the disease, for of the twenty-five males in whom the occupation was mentioned, save soldiers (four) and sailors (six), it was duplicated only three times,—farmer, huckster, and laborer. Or it may be said that twenty-one were laborers or artisans; four only were professional men or merchants. Three of the female cases had served respectively as nurse, dairy-maid, and housekeeper.

Hereditary Influence. — This bore no part whatever in the development of the disease, save in one idiopathic (?) case. In the cases where any such tendency was noted it related more especially to the primary cause of the disease than to the liver-degeneration. The same remarks apply to the presence or absence of a *diathesis* and to previous *diseases*. The latter may be modified in one or two instances, as in two cases that died of pleuro-pneumonia secondary to measles. The former affection in all probability shared in the production of the disorder of the liver. Finally, it was recorded individually that four of the females were married and one single, and that the colored race had but one representative out of the eighty.

Turning to a consideration of those causes which may be termed exciting, or from which the fatty degeneration developed secondarily, it is found that they are numerous as well as variable, but that in the main they corresponded with the testimony of others. In three of the cases the patients died violent deaths and the liver was found fatty. Of course no exciting cause could be determined in these cases. It is possible that the liver was in the transition-period of fatty infiltration at the

time of the accident, as in cases reported by Frerichs. As mentioned above, the habits of the individual were the sole exciting cause in ten of the cases. The associate causes of the six remaining were equally divided between phthisis, organic heart-disease, and carcinoma. This latter disease was a frequent factor in the causation,—ten times. Phthisis and tuberculosis occurred the most frequently, eighteen times in the eighty cases. Organic heart-disease, including pericarditis and dilatation of the heart, was also potent, having been found nine times. The degeneration was secondary to carcinoma nine times. The remainder of the causes—one or two to each reported case—were those which lead to prostration and wasting of the body.

One of the cases I have noted as idiopathic simply because the exact cause cannot be given. It is probable that diet and a personal tendency to fat-infiltration were the exciting causes. The specimens were presented by Dr. Thomas, and were removed by him from a man, aged 40, who died of acute dysentery. The reporter remarked upon the absence of an exciting cause, and laid stress on the influence of the very large liver on the fatal termination of the intestinal disease. Another case is worthy of notice, the origin of which is classed as idiopathic, for the truth of the remarks of its reporter, to the effect that the degeneration preceded the general development of tuberculosis. Presented by Dr. S. Weir Mitchell, his narration of the case was that the male child, aged five and a half years, had died, after six days' illness, from an acute attack of vomiting and purging. The child during life was readily prostrated by a slight catarrh. At the autopsy two or three pea-sized tubercular masses were found at the apex of the right lung, but further than this the only lesions were the extreme fatty degeneration of the liver and a considerable deposition of carbonate of lime in the renal tubules.

Another of the cases is worth placing in bold relief. It is that of a female who had been in the habit of ether-drinking. The heart was found fatty and the aorta atheromatous, in addition to the liver-change, showing the known tendency of this stimulant, used persistently, to cause degenerative changes.

Pathology and Pathological Anatomy.—In none of the reported cases were any remarks made upon the pathology of this disease. The results of this analysis are the only contributions that can be given to this part of the subject, and in the main they bear out the observations of others. It is interesting to read that Dr. Woodward remarked (vol. i. p. 201) that the peculiar color of the skin in the cancerous cachexia may be due to the fatty degeneration of the liver, because of its occurrence only when this alteration is present. Observation does not seem to have confirmed this statement. The cases of Mitchell and Thomas, in relation to etiology, have been alluded to. Some discrepancies appear to exist in the relative frequency of the etiological factors: thus, the male exceeded the female sex (there were eleven males to seven females that died of phthisis in some form). The females, as is well known, exceed the males under the above circumstances, and hence the apparent disagreement with the known facts. When it is remembered that the specimens are derived generally from hospital-patients, and that the males are always greater than the females, this variance is not truly correct.

It is difficult—in fact, some say impossible—to draw the line between fatty degeneration and infiltration, unless cases be followed up and a chemical analysis made. It has been said that in the former instance there is an absence of fat in other portions of the body, while in the latter it is present to a marked degree.

The following analysis of the relation between fatty liver to the presence or absence of fat in other parts of body is presented to throw some light on the question. In twenty-eight cases of the eighty in which any facts were brought to bear on this subject the frequency of each condition was equal.

Fatty Liver with Fat in other Portions.—In the fourteen cases the association of this hepatic change with the deposition of fat subcutaneously or in the mesentery and other organs occurred four times in which the cause of the degeneration was alcoholism, twice each in carcinoma, phthisis, general debility from age, and chronic disease, and once each in organic heart-disease and an acute disease, while in the fifteen cases in which emaciation was striking the cause of the fatty liver differed: thus, five times it was phthisis, three times carcinoma, once each Bright's disease, ery-

sipelas, chronic diarrhœa, diabetes, alcoholism with syphilis, and in two cases of idiopathic origin.

The well-known description of the anatomical appearances—gross and minute—was not departed from in the observations, and it is not worth while to refer to them in this paper, which is to deal with numerical statements chiefly. It may be remembered that in one of the cases the liver was "nearly white, and seemed almost like a mass of tallow." This was the only instance in which such a description was made, and, as it is probably due to the fat being chiefly stearine, is worthy of more extended notice. The patient from whom it was removed died of cancer of the rectum at the age of fifty-nine. In addition to the fat in the liver, there was an "enormous accumulation of fat in the abdomen," and the kidneys were fattily degenerated.

In one of the cases (child, æt. 2, died from pericarditis and pleuritis) the fatty degeneration was noted in curious irregular spots of a very light color on the surface and involving the substance. In a case not included in the table (a boy, æt. 11, dying from peritonitis), the same localized degeneration was noted. These circumscribed changes are said to be due to local alteration of the circulation in the parts. It is difficult to determine the cause of such a change in the first instance. It is strange these isolated cases should be among the youngest. These changes are common in cirrhosis, amyloid disease, carcinoma, etc., of the liver, due to a similar local nutritive disturbance. In the beginning attention was called to the frequency of this association.

Concerning the degree of degeneration, it was recorded as slightly fatty eighteen times, fatty forty-six times, and very fatty sixteen times. The proportion of the cause to the degree varied very much. For instance, take the last class, and it is found that three times in typho-malarial fever, twice in carcinoma, phthisis, and organic heart-disease, and once each in alcoholism, old age, gastro-intestinal catarrh, dysentery, and erysipelas, this extreme degree was noted. Belonging to the same class were two cases, one entered as of idiopathic and the other of doubtful origin. From this it is seen that the degree is not strictly related to the cause, although in deciding upon the degree the personal equation is an antagonizing factor in each case.

The size of the liver was recorded approximately thirty-one times, definitely eight times. Of the entire number, thirty-nine, thirty were classed as enlarged or large, five as very large, two as of the natural size, one as swollen, and one as small. Of the very large class, in three the cause of the degeneration was alcoholism, in one tuberculosis, and one is recorded as idiopathic (Thomas's case). The heaviest liver weighed nine and one-half pounds. The single small liver that had undergone fatty change was removed from a female (æt. 77) who had had jaundice during life and a supposed cancerous tumor in the right hypochondrium. The duration of her illness was seven weeks. At the autopsy an enormous gall-stone (eighty-two grains) was removed from the distended gall-bladder; but it is recorded that there was no obstruction of any duct, and that the heart and kidneys were healthy, the suprarenal capsules markedly degenerated. The cause of the degeneration was probably the jaundice, especially as there was atrophy of the liver.

The size and texture of the *spleen* alternate so frequently with changes in the liver, for obvious reasons, that it will be of interest to scan any related changes. This should not necessarily be the case in fatty liver; and in fact it was not the case, for in every instance in which splenic alteration was recorded it could be explained by invoking the cause of the fatty liver. Thus, it was small in cancer of the rectum; large in diabetes, typhoid fever, and dilated heart; large and soft in organic heart-disease (twice), interstitial nephritis, yellow fever, and a case of general burn; soft and pulpy in yellow fever (one); soft and pale in two cases of measles. On the other hand, the times (nine) it was recorded as normal varied as much as to causation. The frequency of alteration of the kidney was great, its condition being recorded sixty times,—in ten instances as healthy, ten as congested, nineteen as fatty, four anæmic, nine organically diseased (cirrhosis, etc.), three tubercular, one each as amyloid, suppurative, flabby, and "surrounded by fat." The only form of alteration of special interest in this connection is the one recorded as fatty and large. Its frequency shows the ofttimes coexistence of these similar changes in these glands, while the cause, if studied, is found to be a coincident one. Thus,

tuberculosis in six, carcinoma in four, organic heart-disease in five, and intemperance in two cases, and old age and extra-uterine pregnancy in one each, were the exciting causes.

The other organ of the body that undergoes fatty degeneration at the same time that this process is going on in the liver, the heart, has also been studied in the instances in which its condition was recorded, with the following results. Excluding the eight cases of organic heart-disease (two of which were fatty), twenty-four examples are given, which may be classified as normal in five, fatty in twelve, covered with fat in four, and hypertrophied, dilated, and small in one each of them. Of the twelve instances in which the heart was fatty, the kidney was cirrhotic four times, fatty three times, congested twice, not recorded twice, and normal once. The causes of the conjoined cardiac and hepatic change varied very much,—twice each in alcoholism, carcinoma, and tuberculosis, and the remainder of instances in different causes. In no instance was fatty heart recorded in the clinical notes as detected during life.

The symptoms of fatty liver, even when the most pronounced, are so obscured by the more decided symptoms of the primary disorder that it is seldom any clinical note is made of them during life. Hence the paucity of observation in the cases just analyzed. Apart from the note of the size of the liver, made in only a few instances, we can contribute nothing to its symptomatology.

TRANSLATIONS.

Progressive Atrophic Myopathy (myopathy without neuropathy; commencing ordinarily in infancy in the face).—In 1874, Landouzy published an account of two cases of progressive muscular atrophy of infancy, which appeared in the "Mémoires de la Société de Biologie." During the present year the results of further study of the subject in the laboratory of Professor Vulpian, by Messrs. Landouzy and Dejerine, are embodied in a paper published in the *Revue de Médecine*, February and April, 1885. This valuable contribution is illustrated by photo-engraving, showing the progress of the disease in several cases; in one the evolution is shown by a photograph taken after an interval of eleven years from the first of the same patient.

The symptomatology, course, and prognosis of the affection are considered at length, illustrated by numerous cases. As regards the diagnosis, it may be laid down as the rule that, in a given case of muscular atrophy, whatever the age, whatever the duration of the disease, if there is present atrophy of muscles of the face without any symptom whatever of bulbar paralysis, there can be no possible hesitation as to its nature: it is a *myopathic atrophy*. Prior to the appearance of facial atrophy, however, there may arise some difficulty in diagnosis from myelopathic atrophy, when aid will be derived from an examination into the following points:

First. Myopathic atrophy affects muscles individually, and in the sphere of distribution of the same nerve are found muscles absolutely healthy and those absolutely destroyed.

Second. The prolonged conservation of certain muscles,—*i.e.*, supra- and infra-spinatus, subscapular, and the flexors of the forearm.

Third. The absence of fibrillary contractions of the muscles, and the presence occasionally of retractions.

Fourth. Preservation of the tendon reflexes, absence of the reaction of degeneration, and the frequency of heredity.

From pseudo-hypertrophic muscular paralysis it is distinguished by the fact that at no period of progressive atrophic myopathy is observed hypertrophy, either true or false, total or partial, passing or permanent, of a muscle or of part of a muscle. From beginning to end it is *atrophy* of the muscular system which constitutes the only and unique symptom.

The integrity of the central and peripheral nervous system having been established by these investigators, they conclude, after careful study, that the disease consists in a species of primitive alteration of the muscular fibrillæ. From post-mortem examinations it has been demonstrated that this alteration is due to atrophy of the primitive bundles (with or without preceding hypertrophy), and, *as far as the alteration of contractile substance* (sarcous elements) is concerned, the lesion is like that of pseudo-hypertrophic paralysis, but the hypertrophy of the connective tissue is absolutely wanting in the former.

Regarding the two affections as forms of a muscular cirrhosis, the former would be an *atrophic* cirrhosis, the latter *hypertrophic* cirrhosis.

The difference between this progressive parenchymatous muscular cirrhosis and neuropathic atrophies is the difference between a disease and a symptom.

The following conclusions will give a summary of the principal points in this interesting paper:

1. The affection described by Duchenne de Boulogne under the name of progressive muscular atrophy of childhood, and which hitherto has been regarded as being of the same nature as the spinal progressive muscular atrophy of the adult, appears to be a special disease, having nothing in common with the latter except the relations of symptomatological expression.

2. Whereas the latter is neuropathic and spinal in its origin, the former, from its very beginning, is purely muscular. This distinction is made prominent in the name, which separates a *myopathic* malady from one which is *myelopathic*.

3. Clinically, as well as pathologically, progressive atrophic myopathy is a disease entirely special in its etiology, its pathogeny, its symptoms, and its evolution.

4. This disorder (of the facio-scapulo-humeral type) commences most frequently in infancy, in the muscles of the face (muscles of expression). However, it may not appear until adolescence, or even at a more advanced age.

5. When it commences in childhood, the atrophy (of the orbicularis, labialis, and palpebralis) produces a peculiar physiognomy, which is most marked when laughing or crying, the incomplete movements of the lips and immobility of the features contrasting strongly with the animation of the eyes.

6. After appearing in the face in infancy, the malady begins to become generalized by attacking the muscles of the upper extremities, particularly those of the shoulder and forearm.

7. The muscles are affected individually, and not in groups. The supra- and infra-spinatus and subscapular, and flexors of the hand and fingers, persist intact almost indefinitely.

8. The affected muscles atrophy from the beginning. There is no antecedent hypertrophy.

9. The muscles belonging to special apparatus (sight, mastication, deglutition, phonation) remain intact during the entire course of the disease. It is the same with the respiratory muscles.

10. The consistency of the muscles presents nothing in particular. In some, however (the biceps among others), there is retraction of the muscular fibres, and contracture.

11. In all cases fibrillary contractions are completely wanting, and the idio-muscular contraction has disappeared, or is greatly diminished and difficult to demonstrate.

12. The electric contractility is only quantitatively modified: there is no reaction of degeneration.

13. Tendon reflexes usually are preserved, even when the muscles are atrophied. In some cases, however, they disappear very early.

14. General and special sensibility, the nutrition of the skin, the cutaneous reflexes, the action of the sphincters, are preserved during the whole course of the disease.

15. The progressive atrophic myopathy of adolescence, as of adult age (more rare than in infancy), *does not always begin with the face*. It may begin with the superior extremities, or more rarely in the inferior. The face is affected consecutively, or it may remain intact. This observation applies whether the case is one of the type facio-scapulo-humeral, or the type scapulo-humeral, or the type femoro-tibial.

16. The evolution of the disease is slow.

17. The lesion consists anatomically in an atrophic myositis, with slight sclerosis, without augmentation of volume.

18. The diagnosis of progressive atrophic myopathy from *spinal progressive muscular atrophy* (type Aran-Duchenne of Charcot, and scapulo-humeral type of Vulpian) is concerned only with the latter type.

a. The face is affected. In myelopathic atrophy the face is never affected; in atrophic myopathy in childhood the face is always affected.

b. The face is not affected. The diagnosis is based upon the indefinite preservation of certain muscles, the absence of fibrillary contractions, the retraction (contracture) of certain muscles, the absence of reaction of degeneration, the preservation of tendon reflexes, the slowness of evolution, and heredity (direct or collateral).

These and other points serve also to dis-

tinguish it from amyotrophic lateral sclerosis.

19. It is distinguished from pseudo-hypertrophic paralysis by the following characters:

a. In atrophic myopathy it is *the rule* that the face shares in the atrophy.

b. In this disease hypertrophy is wanting. In short, pseudo-hypertrophic paralysis is an affection of early infancy, much more common among male children than female, and the patients rarely pass the twentieth year. In progressive atrophic myopathy the disease appears later (*seconde enfance*), in childhood most frequently, but may be observed at all periods of life. The sex is indifferent, and its duration is almost indefinite.

20. It is distinguished from the "juvenile form of Erb" by the participation of the face in the atrophy, the absence of pseudo-hypertrophy, and the frequency, if not the constancy, of heredity, direct or collateral.

The prognosis is grave, but life is prolonged because its course is slow and the muscles of special apparatus are spared (mastication, respiration, etc.).

The pathogeny is unknown. Heredity is the only ascertained etiological factor.

The treatment should be addressed to the building up of the general system, medication, and electro-therapy.

The rarity of the disease is believed to be only apparent. It has been probably more than once misconstrued, because incompletely described and insufficiently studied.

However characteristic may be the physiognomy of a progressive atrophic myopathy, it may be overlooked by an eye which has not been previously instructed: therefore works on semeiology, in the consideration of the face, should recognize the progressive atrophic myopathy of infancy and make mention of the *facies myopathique*.

Antiseptic Pulmonary Medication.—Dr. Dujardin-Beaumetz devotes one of his clinical conferences to the discussion of a subject of present and pressing importance,—the problem of depriving the air of the morbific germs which give rise to infectious disease. After briefly considering the development of the theory of particulate infection, he discusses the pathology of phthisis, adopting Koch's view of the dependence of tubercle upon the presence of bacilli, and claims that experience has demonstrated that even bacillary phthisis is curable by the use of antiseptic agents. Among the remedies most useful in its treatment are medicated inhalations and substances which are eliminated by the pulmonary mucous membrane. The agents used for inhalation are such as iodine, iodoform, eucalyptol, corrosive sublimate, carbolic acid, and, in short, the least irritating of the necrophytic group. For use with the atomizer Miquel recommends

℞ Hydrarg. biniodid., .50;
Tr. opii deodorat., 10.;
Aquæ destillatæ, 1000. M.

Parenchymatous injections of corrosive sublimate have furnished no satisfactory result, and have therefore been abandoned.

Internally, creasote and terebinthinate substances, or those containing sulphur, can be utilized, on account of their elimination from the pulmonary surface; but they are less serviceable than other remedies which act as modifiers of nutrition in such a way as to make the patient's tissues an unsuitable soil for the development of micro-organisms or the culture of bacilli. The favorable influence of altitude in destroying bacilli is mentioned; and the method of Debove, of super-alimentation with meat-powders, nutritious broths administered through a tube, was pronounced sufficient of itself to bring about amelioration and even a cure of tuberculous subjects.

If the discovery of Koch has not yet modified the therapeutics of pulmonary phthisis, it enables us at least to give a scientific explanation of the action of many medicinal agents which we are accustomed to use, and this of itself constitutes a great advantage in therapeutics, but especially in prophylaxis. The fact of the contagion of tuberculosis is now incontestably established, and on every hand sanitarians and physicians are seeking to establish upon a scientific basis the hygiene of tuberculous patients. The progress made in the two years since the announcement of Koch's discovery warrants the hope that a day will come when, better informed upon the mode of development and the existence of the tubercle-bacillus, we shall be in a position to destroy it or attenuate its effects.—*Bull. Gén. de Thérapeutique*, May 15.

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EDITORIAL.

HOT-WEATHER HYGIENE.

A PARAGRAPH in Mr. Stanley's recent work on Congo contains such good advice for those travelling in hot climates that we venture to repeat it. It will be seen that the suggestions are not entirely without application to our own latitude during the almost tropical heat of midsummer. Under such circumstances, the diet, clothing, and habits need to be placed upon a hot-weather basis, and, with such an adjustment of the economy to the environment, the hot weather may really be made less prolific of disorder than the cold. The advice has been to some extent anticipated and its value shown by experience in the management of young children during the summer. Mr. Stanley says,—

"From the moment of arrival the body undergoes a new experience, and a wise man will begin to govern his appetite and his conduct accordingly. The head that was covered with a proud luxuriance of flowing locks, or bristled bushy and thick, must be shorn close; the body must be divested of that wind- and rain-proof armor of linen and wool in which it was accustomed to be encased in high latitudes, and must assume, if ease and pleasure are preferable to discomfort, garments of soft, loose, light flannels. That head-covering which London and Paris patronize must give place to the helmet and puggaree, or to a well-ventilated light cap with curtain. And as those decorous externals of Europe, with their sombre coloring and cumbrous thickness, must yield to the more graceful and airy flannel of the tropics, so the appetite, the extravagant power of digestion, the seemingly uncontrollable and ever-famished lust for animal food and the distempered greed for ardent drinks, must be governed by an absolutely new *régime*. Any liquid that is exciting, or, as others may choose to term it, exhilarating or inspiring, the unseasoned European must avoid during daylight, whether it be in the guise of the commonly-believed innocuous lager, mild Pilsen, watery claret, *vin ordinaire*, or any other 'innocent' wine or beer. Otherwise the slightest indiscretion, the least unusual effort or spasmodic industry, may in one short hour prove fatal. It is my duty not to pander to a depraved taste nor to be too nice in offending it. I am compelled to speak strongly by our losses, by my own grief in remembering the young, the strong, and the brave who have slain themselves through their own ignorance."

THE INTERNATIONAL MEDICAL CONGRESS AND THE PROFESSION.

THAT the work of the committee appointed by the American Medical Association to make arrangements for the International Congress fails to give universal satisfaction, under the circumstances, need surprise no one, but the inference is not warranted that the Congress will not be duly provided for nevertheless. Until the American Medical Association, however, can maintain sufficient order at its meetings to enable it to take a creditable vote upon questions coming before it, it should abstain from interfering further with the arrangements for the International Congress. In fact, for the future it had better leave the matter where it belongs,—in the hands of the American medical profession at large, which can be depended upon to provide the necessary intelligence, energy, and organizing ability to make the Congress as successful as any which has preceded it. If the members of the committee appointed to make the arrangements become hopelessly involved in dissensions among themselves, or if they prove unable to accomplish satisfactorily the task intrusted to them, it will be in order for the profession to move in the matter independently by calling a mass-meeting of the representative men from all sections of the country to confer upon the situation and make all necessary arrangements.

Let a meeting be called at Washington early next fall, in which the several National associations shall be properly represented; let a committee of the profession be then appointed to make the needed arrangements for the entertainment of the International Medical Congress, the committee being free to accept or reject, modify or ignore, the work of the committee of the American Medical Association. Let the principle of natural selection (*i.e.*, the place seeking the man, and not the man the place) govern the committee in making its nominations, and all place-hunters, whether of the early or late committee, be studiously ignored, and the profession at large can be depended upon to give its adherence and support to the undertaking. If this is done, we feel certain that it will be found that the majority of the members of the American Medical Association will sympathize with the movement, and its committee will eventually be forced to co-operate, or will cease to exist from want of moral and financial support.

MEMBERS BY APPLICATION IN THE AMERICAN MEDICAL ASSOCIATION.

ATTENTION is called to the fact that members of State or County medical societies recognized by the Association have now an opportunity of becoming Members by Application of the national organization. The necessary changes in the By-Laws were made by amendment adopted in Washington in 1884, and during the year which has just ended a large number have availed themselves of the opportunity thus afforded. Members by application have the same privileges as delegates, except the right of voting. They retain their membership so long as they remain members in good standing of their local societies and pay their annual dues to the Association.

LEADING ARTICLES.

HAS CHOREA AN ESSENTIAL LESION?

ATTEMPTS have not been wanting to establish a uniform anatomical lesion in chorea minor, and to account on physiological grounds for the disturbing element which is interpolated in the track of a voluntary motor impulse between the origin in the cortex and the final distribution of the nerve in the individual muscles, but hitherto no morbid appearance has been acknowledged as characteristic of the disease. The proximate cause of the peculiar extravagance of muscular movements is recognized by Dickinson in a dilatation of the arterioles of the brain and spinal cord, favoring local degenerations and sclerotic changes; Ellischer finds thickening of walls and diminution of calibre of the cerebral vessels producing local accumulations of blood-corpuscles and serous effusion, and increase of connective tissue with destruction of ganglionic elements; Meynert attributes the symptoms to lesions of the cortical layers; Kirkes and Hughlings Jackson, to embolic processes affecting principally the corpora striata; Bastian regards the plugs not as emboli, but as merely accumulations of leucocytes; several observers, notably Dickinson, have found changes in the gray matter in the spinal cord, most evident in the dorsal region, destructive and sclerotic in character; Ellischer has also found alterations in the nerve-trunks.

Dr. H. C. Wood, in a paper recently read before the College of Physicians of this city, seeks to harmonize these various observations by making the essential lesion of chorea to consist in the alterations in the ganglionic cells, which may be of all grades of intensity up to complete destruction of nuclei and vacuolation. This view is based upon the study of chorea in dogs, in which such changes were found after death in the gray matter of the anterior cornua of the spinal cord. He argues by analogy that similar morbid changes occur in the human subject, and if they are not discernible after death it is because the disease has not progressed sufficiently far to enable us to detect its presence. For him there is no such thing as functional disease, since every modification of function is accompanied by alteration of protoplasm,

even though so slight as to escape detection by our present methods of examination.

A pathology that cannot be demonstrated would by some be considered as belonging to the domain of faith rather than of science: at all events, if changes in the ganglion-cells are not discoverable before the appearance of the other symptoms, their active causative agency may well be questioned. It is not impossible, however, that such changes, when they occur, may be secondary to the morbid action, or even due to the excessive muscular movements.

To our mind, the clinical history of chorea minor negatives the supposition that antecedent organic changes in the nervous system exist, at least in a large number of the cases. The short duration of the disease, the complete recovery, the limitation of the disease to adolescence, the occurrence of unilateral attacks, the disappearance of the symptoms after the removal of a reflex source of irritation (as after abortion or removal of a tape-worm), the cessation of movements during sleep and under anæsthesia, and especially the occurrence of marked cases without any appreciable lesion being found after death, would seem to exclude the idea of any permanent organic lesion in the motor tracts, and especially of such degeneration in the spinal cord in the human subject as the essayist found in dogs.

Chorea is a sensory motor neurosis; but is it not also something more? The mental faculties and moral nature are affected, often before the characteristic movements are evident. The protoplasm of nervous elements is generally acknowledged to be at fault; but is the protoplasm of muscular tissue healthy?

The phrase "insanity of the muscles" at once suggests itself as we stand watching the antics of a choreic subject while endeavoring to make his muscles obey his will; and we cannot escape the impression that it is not alone the nervous system which is at fault.

Without entering into the discussion further, however, it would seem that the happy phrase of Poore in speaking of the muscles in writer's cramp would apply with even more force in chorea. He says the muscles are in a state of "irritable weakness," and this is plainly the case in chorea early in the course of the disease, and may even be recognized previous to its full development. To the hyperkinesis of the mechanism of transmission and of motor co-ordination, in which the essential character of chorea consists, according to Jaccoud, we may add excessive muscular irritability with weakness. There is not much hope, therefore, that any uniform anatomical site may be found for the multiform manifestations of chorea, or even to explain the erratic muscular movements.

Dr. Handfield Jones has well observed that "there seems no more reason for requiring a demonstrable lesion in chorea than in many cases of insanity and delirium tremens, between which and chorea a considerable analogy certainly exists."

It is not denied that nerve-lesions and other organic changes occur, and may evoke choreic symptoms. Upon this point the experiments of Dr. Angel Money upon the experimental production of chorea and other results of capillary embolism, recently read before the Royal Medical and Chirurgical Society, are very interesting and important. Dr. Money's conclusions were that capillary embolism of the spinal cord is the probable cause of chorea in the animals experimented upon; but he contended that any symptom of disease of the nervous system could be caused by capillary embolism. He declares that chorea is due to defective nutrition of certain parts of the nervous system, and that this defective nutrition may be brought about by many means, embolism among the number. The reasons for locating the lesion in the brain in some cases of human chorea are irrefutable. The changes noticed in the ganglionic cells then would be secondary, and the lesion in such cases, up to a certain point, functional and remediable, beyond that point organic and permanent.

F. W.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

TRANSMISSION of Syphilis from a Child to a Wet-Nurse.—Prof. Fournier, treating on this subject in a recent lecture, spoke of how a physician should act when called upon to act as an expert in these cases (which are very frequent in the French courts, owing to the habit the French have of putting their children out to nurse, or of employing a wet-nurse):

"In these cases you must call the woman

to your office, telling her to bring her husband and her child with her. Most likely she will tell you that she entered the family in good health, and that afterwards she noticed a sore on her breast. There are five points to determine:

"1. Is the nurse affected with syphilis or not? This is the base of your inquest, for the simple reason that it is no use in going further if she is not, and the mistake has been made. As a rule, however, it is found that she is.

"2. Is it a chancre of the breast? This is easy to determine. You have only to examine it and the axillary space. If the sore still exists, notice its seat and color and if it has a smooth surface; above all, look to the induration,—that is the capital point. Then explore the axilla, to find the symptomatic bubo. In a word, assure yourself that the lesion is really a chancre of the breast, as that is the key of the whole case.

"3. Does the disease come exclusively from the chancre of the breast? This is important. Examine the lips, the tongue, the genitals, and also the other ganglions, and write it down if nothing else is found.

"4. Is the disease in proper chronological *rapport* as to the date of the invasion with the time she nursed the child? In other words, here is a case: a nurse took a child on the 24th of April, and she pretended to have a chancre on the 4th of May. On examination, chancre was found on the breast, but roseola was noticed, and mucous *plaques* were found in the mouth. Did she get it from the child? No; for two good reasons. First, the degree of incubation is at a minimum of fifteen days; secondly, the secondary symptoms do not manifest themselves for forty to forty-five days afterwards. So you must establish the age of the infection by all the clinical means you have at hand.

"5. Was the nurse clear of it when she took the child? To resolve this question, examine the husband and the child and other children of the nurse, then get the evidence of the doctor who attends the family, who, if he did his duty, should have also examined the nurse before giving her the child.

"Now the case should be complete."

Treatment of Chorea.—Prof. Joffroy, in speaking at the new Hôpital des Enfants Malades on this subject, said, "I do not at all propose to make a critical review of all the medicines that have been proposed to cure this disease, but I will say at once that the principal medication employed at this hospital is chloral, which is combined with packing in the wet sheet. I may say that I believe that chloral is the most powerful *anti-nerveux* that modern therapeutics possesses. In 1879 I first commenced its use here, when I gave it to two of our little patients who were seriously ill with chorea. It will interest you to learn how I employed the remedy. I gave a gramme of chloral every quarter of an hour until I obtained sleep, and when the child woke up I gave it another gramme. In this way it obtained sleep that was interrupted only twice in the twenty-four hours,—just enough to give the patient two meals. After four days in one case and five in the other, I stopped the use of the chloral, not daring to continue it to keep up this profound and continuous slumber. In both of these patients there was a notable improvement. Most of those who have given this remedy have been satisfied with giving it to produce a little quiet or sleep from time to time. Our present method is to let them have it regularly three times a day,—morning, noon, and night,—and keep it up for two weeks, one month, even two months, until they are completely cured. I never had any accident with it, except that once in a while a sort of rubeola or erythematous eruption appeared which did not last more than twenty-four hours, and often disappeared spontaneously, even when the treatment was kept up.

"This uniform method has had for effect a diminution of all the symptoms. I try to give them profound sleep at night, and also after meals during the day. The question of dose is important. Over ten years of age, I order four grammes of chloral in three doses,—one gramme in the morning, one gramme at noon, and the other two grammes at night. In children from six to eight years old the dose is less, and should never go over three grammes. In all cases you must feel your way, and graduate your doses in such a way that you get the sleep in a quarter of an hour after the dose, at least for the dose which you give at night. This mode of treatment must be then continued in a regular way until all the choreic agitation has been suppressed. To have your little patients accept this remedy, which you know has such a disagreeable and penetrating taste, you must disguise the taste. We proceed as follows. Take an aqueous concentrated solution of chloral, pure (nearly four grammes for one of water), and mix it with rather thick gooseberry jelly; make the mixture so that a teaspoonful of it will represent a gramme of the active principle, and they will take it readily as a dessert after their meals.

"You have been able to see yourselves, gentlemen, the good effects of this treatment. Several of our patients have presented a grave form of chorea, and you have seen them go on to cure in a regular way on this treatment being applied. It is quite an important result to be able to suppress at any moment these very violent agitations; and even if there be a regular duration of this disease I believe that chloral will diminish it, so that it really has a curative action. In most of the cases chloral is all that is needed; but when you get a very violent case, with incessant agitation, with wearing of the skin,

then comes the turn of another important therapeutic remedy. I mean the wet-pack. It may even be used in the light cases, but its real indication is found in the severe forms which are accompanied with fever, and where a fatal ending is feared. I give the wet-pack as follows twice a day, morning and evening, employing cold water (10° to 12° C., say 55° F.). Well-water is very good. The sheet is wetted and then slightly wrung out, and then it is spread out on a mattress that is first covered with an oil-cloth. The little patient is then put on it, and wrapped up and rubbed vigorously from head to foot. In one or two minutes, or as soon as the reaction is noticed and the patient commences to warm up, without taking the wet sheet off we roll it over the child several times and cover him up with a large blanket, only leaving the head out, and he is taken to bed: he is left so for half an hour, in a sort of vapor-bath. The effect is excellent. The child feels it at once, and a period of calm and repose follows, often with sound sleep, and when he wakes up he is better already. From these results I think I am authorized to propose the use of chloral and the wet sheet as a method of treatment applicable to most if not to all cases of chorea."

On the Tail in the Human Embryo.—M. Fol, of Geneva, calls the attention of the Académie des Sciences to two human embryos that he has carefully dissected and photographed in sections. There were three hundred and twenty sections, made with great care, and from the facts shown by the eminent *savant* it appears that, without question, during the fifth and sixth week of its development the human embryo is furnished with an incontestable tail.

Artificial Anæsthesia without Sleep.—Prof. Brown-Séquard communicates some new results that he has obtained on this subject. In 1882 he stated that under the influence of irritation of the laryngeal mucous membrane sensibility and pain would disappear in all parts of the body. He showed then that it was by an inhibitory influence exercised by the superior laryngeal nerves over the nerve-centres that this phenomenon was produced, and that it could be made to act on one side of the body only. From a number of new facts that the eminent physiologist has found by experiment, it is proved that common sensibility and pain can be made to stop all over the body under the influence of the irritation of the mucous membrane of the larynx, and without the intelligence or the senses being interfered with.

Poisoning of a Child by its Mother's Milk.—Prof. Brouardel related to the Société de Médecine Légale the following interesting facts, from which he draws the induction that the administration of arsenic to nursing-women should be restricted:

"I was consulted last week on the question as to whether a child of twelve months could have been poisoned by the mother's milk. It seems a man was accused of trying to get possession of his wife's and mother-in-law's fortunes, and he was also suspected of trying to poison his wife with arsenic, and of having caused the death of his child by the same means. The baby had died with symptoms of 'cholerine,' and the mother had suffered at the same time with vomiting and diarrhœa, but, it being then summer, nothing was thought of it. In November, however, suspicion was aroused, as the wife and mother-in-law had renewed attacks of vomiting, and a white powder was found in the man's pocket which proved to be arsenious acid. I had the child exhumed, but it was then six months after death, and we only examined the body *en bloc*, as it was in such a state that the viscera could not be separated. It weighed in all about five pounds, and contained five milligrammes of arsenic. We assured ourselves that this arsenic did not come from the linen nor from the earth around the coffin. M. Gabriel Pouchet then made a number of experiments to see if arsenic was eliminated by the lacteal glands. He gave Fowler's solution to a number of nurses who were in St. Louis Hospital, giving it in doses of from two to twelve drops, and he assured himself that arsenic was always found in the milk in a quantity relative to the dose given. For instance, in one case a nurse who was on eight milligrammes of arsenic showed one milligramme of arsenic for one hundred grams of milk. It must be added that these women were patients who were suffering from skin-disease, and that neither they nor their children showed any signs of disturbance from the drug; but nothing proves that if we could have given it in massive doses the milk would not have been actively poisonous. We then tried experiments on female animals, but with mostly negative results, as they presented such a variable susceptibility to the arsenic. It certainly follows, however, from our experiments, that the lacteal secretion is a mode of elimination that arsenic has a predilection for, and it is prudent not to administer it to nursing-women. In the case mentioned we answered the judges that it was possible that the mother's milk may have been the vehicle of the poison, but that we could not affirm that it was so. The result of the trial was that the husband was condemned to twenty years' hard labor."

Should Keloid Tumors be Operated on?—The Paris surgeons recently have had a very interesting discussion on this subject. At the present moment there are quite a number of these cases to be seen in the Paris hospitals. Prof. Richet operates, but, as a rule, they re-

turn. At the Hôtel-Dieu there is a young man in the service of Dr. Tillaux who has quite a large one of this sort of cutaneous growths, which are called keloid, cancroid, etc. The one in question certainly bears out the name keloid best, as it presents a perfect resemblance to a tortoise-shell in color, size, and shape.

M. Monod said he had presented at the last meeting a child having a large keloid of the neck that came after a burn. Some of his brother surgeons said operate, others said do anything but operate. He requested the opinion of the gentlemen present. For his own part, as there was a pedicle in his case, he should like to operate.

M. Le Dentu preferred not to operate in these cases. He had just seen a case that had been excised by Prof. Richet, and it returned larger than ever. A second operation was followed by the same result. He had begun to treat the case with scarifications. When the keloid is ulcerated it is well to operate, in order to rid the patient of the trouble. Then, if it returns, try scarifications.

M. Reclus mentioned a case at the Salpêtrière of a young woman of 17, having a voluminous keloid of the chin and neck, which had developed itself after a burn. He made compression with emplastrum de Vigo, and at the same time gave salt baths, with cod-liver oil. In a short time (less than two months) she left the hospital with the tumor on the level of the skin and almost cured. Hence he did not think it always wise to operate.

M. Le Fort advised operation in the case of M. Monod's patient, owing to the fact that the tumor seemed movable.

M. Berger operated in 1880 on such a tumor, passing five or six millimetres beyond the trouble, but eight months afterwards it returned larger than it was at first. Recently, with M. Besnier, he had seen a case of one on the shoulder; but this time he tried scarifications, with better results.

M. Verneuil said that it was he who told M. Monod to do anything but operate, because in that case a return is certain. Some keloids are curable when they are in a state of the body that a general treatment will be sustained. There are also some syphilitic keloids that will give way to a specific treatment. He had also seen some of them on the face cured after a course of saline waters and iodine and cod-liver oil. Keloids that are found in arthritics will resist all treatment, and surely return after any operation. He had operated on a number of them without any success. The only thing that presents a chance of success is elastic compression. He had treated a case in this way and the tumor has gone, and he feels confident that the cure will be maintained.

M. Tillaux said that he never operated upon keloids, as they always return.

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Dr. E. Crouzat's Pelvimeter.—At a late lecture of Prof. Charpentier's at the School of Medicine here, he spoke of pelvimeters and showed a sample of the latest. Dr. Crouzat's, he said, was the best ever invented. He condemned all others, of which some eighty had been "committed," he said: even Prof. Pajot had been guilty of one. This new pelvimeter was spoken of in Dr. Charpentier's latest work on obstetrics, but the design given there is not correct. Dr. Crouzat was over two years at work in the studies he made while attempting to obtain a perfect pelvimeter, and he has two interesting pamphlets giving details of his studies. Certainly even a slight examination will show that his invention is incontestably superior to anything that has yet been produced for the purpose. Deformities of the pelvis are common in large cities, at least in the hospitals, from rachitis, etc., so that some more accurate method of measurement is called for than that hitherto employed, even the practised finger of the best obstetrician. In Paris only one finger is used to measure the pelvis, passing it up (having the woman on the edge of the bed) until the finger touches the sacral promontory, then with the nail of the first finger of the other hand a mark is made on the finger introduced, when it is withdrawn and measured, making a deduction for the thickness of the pubis. Elsewhere in Europe they use two fingers, but this is not approved here. Such arbitrary methods of measurement are of little value, and present many errors. It would be very interesting, but would take up too much space in a letter, to give some of the results of Dr. Crouzat's measurements and studies on some hundreds of dry pelves, and his experiments on dead and living subjects made at the "maison d'accouchement" where the doctor was externe; but we will merely say that his instrument is a direct pelvimeter, with a tangent arc at the pubis. It consists of two parts. First, a sort of open tailor's thimble, slit up so that it will fit any finger and allow the finger to pass exactly to the top, on the nail-side, but leaving the pulp of the finger free. This, Dr. Charpentier said, was of great importance, as sensation was preserved. Attached to this thimble by a ball-and-socket joint is a round rod that is marked with millimetre divisions on its outer end. Over this rod passes a small tube bearing two projecting upright tips (one at each end). This tube has an arrangement to stop it at any desired point on the rod and fix it there. The upright tips are of different sizes, and can be changed either end forward. The mode of using the instrument is simple, depending on the size used. The upright tip being placed on the rod, it is drawn back and the tip passed into the vagina, slipping it up in front of the pubis and drawing it back closely. The finger is now introduced into the thimble, and it is carried back and up in the usual way until the sacral promontory is

reached, when all that is necessary to do is to read off the measurement on the end of the rod, without making any deduction.

It will readily be seen that not only the antero-posterior diameter but all the diameters can be measured with such an instrument, as it will swing round on the ball-and-socket joint attached to the finger, so that it will make a circle tangent to the fixed point at the pubic symphysis. Indeed, Dr. Crouzat intends to make some slight modification of it so as to calculate all the dimensions. The introduction of the instrument is quite painless in all multiparæ, and in the primiparæ, where the vaginal canal is not very dilatable, with care being taken to oil it well it was found to pass without giving much discomfort.

It will be noticed that the finger holds and places the pelvimeter, but it does not measure. The measurements are calculated on the sliding rod, after a vast number of experiments to prove them. A number of trials were made with the fingers of some of the best obstetricians here, for comparison with the instrument. Some of the trials were verified on the cadaver afterwards, and in every case the instrument was correct, while the finger made a considerable error.

Treatment of Asthma by Pyridine.—Prof. Germain Sée, with his wonderful talent for work, has a new treatment of asthma of the two forms that he calls "nervo-pulmonary" and "cardiac," by pyridine. In regard to the action of pyridine Dr. Sée concludes as follows, for the two forms of asthma mentioned: "In any form of asthma, if it be primordial and of a gouty or herpetic origin, iodide of potassium is the true remedy. When iodism has come on, then the pyridine finds its sphere, and it ought to be considered as the best means of curing all attacks of iodism; but the iodine is the real remedy. Pyridine is much superior to morphine. Its action in injection is much more durable and very much less dangerous. In asthma of the nervo-pulmonary type the attacks can be made to stop at once by this means. For asthma complicated with grave pulmonary lesions the treatment should be kept up for at least a week, to insure the effect. In cases of the cardiac form pyridine renders great service in preventing that most annoying symptom, the sense of oppression."

Aseptol.—M. Serran has directed attention to this substance. It is a liquid of a rose color, and is also called "acide orthoxphenylsulfurex." It is an antiseptic three times as strong as carbolic acid, and it has no disagreeable odor. It may also be given in quite considerable doses by the stomach without any danger. It is also very soluble in water, and destined, it is thought, to replace carbolic acid in most of its uses, especially for internal administration.

The cholera in Spain and the vaccination operations of Dr. Ferran continue to cause a great deal of talk, but nothing definite can be said in the matter until we get the report of the jury of doctors who have gone to witness Dr. Ferran's operations. At present our medical papers are full of it, mostly crying it down, as they think his mode of culture of the bacillus is open to doubt as to its correctness.

Dr. Noël Guéneau de Mussy, who, owing to his perfect command of English, was well known to Americans in Paris, has just died.

Prof. Brouardel has returned from the International Hygienic Congress at Rome. The Congress does not seem to have done anything wonderful. The disinfectants approved by vote were steam at 100°, acide phénique (carbolic), chloride of lime, and ventilation. They also voted that all vessels coming from contaminated places should have a steam-room for disinfecting purposes.

Treatment of Alcoholism by Injections of Sulphate of Strychnine.—Dr. Dujardin-Beaumetz treats cases of mania a potu by hypodermic injections of the following solution:

℞ Sulphate of strychnine, 10 centigrams;
Aqua destillata, 10 grams. M.

This was given in one case up to one-gramme doses, with cure as a result.

For Bronchial Catarrh:

℞ Acid. carbolic., 0.50 centigramme;
Syrup of mint, 30 grammes;
Aqua destill., 120 grammes. M.

S.—Twice a day a teaspoonful before meals.—(Dr. Chérie.)

THOMAS LINN, M.D.

PARIS, June, 1885.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA ACADEMY OF SURGERY.

A MEETING of the Philadelphia Academy of Surgery was held June 1, 1885, Vice-President Dr. R. J. Levis in the chair.

EPITHELIOMA OF THE PENIS.

Dr. F. H. Gross: I have here a specimen of epithelioma of the penis, which I removed ten days ago from a man 75 years of age, a widower. One year ago he noticed a small pimple on the glans penis, which was not sore or inflamed. This grew slowly for six months; then it "gathered," to use his own expression, and discharged. It then ulcerated. I amputated the penis ten days ago, going as far back as possible. The glands of the groin were not involved. In performing the opera-

tion, I tied a small rubber band close to the pubes. I then made a circular flap, dissecting the skin from the corpora cavernosa and severing the urethra a little longer than the rest of the stump. I then slit the urethra and attached it to the rest of the skin. There was no venereal history in this case.

Dr. William Hunt: I would ask if there is any foundation for the popular idea that epithelioma of the organ is less apt to return after removal than any other form of epithelioma; and, if so, can any one suggest a reason why such is the case? I have seen cases in which it has returned, but the patients are generally free for a long time.

Dr. S. W. Gross: It is a fact, I think, Mr. President, speaking in a general way, that after removal of the penis for epithelioma the cases are apt to pursue a more favorable course than epithelioma in other situations,—as, for instance, in the rectum. I fancy that the explanation of this is to be found in the free removal of the disease. After amputation of the penis, we are in much the same position as after amputation of a limb for malignant growth. If there is no perceptible lymphatic involvement, and the organ be taken off sufficiently near the pubes, there is no reason why the prognosis should not be extremely good. Many of us can recall cases in which there has been an absolute cure,—this statement being based on freedom from recurrence extending over a period of from ten to seventeen years.

When the lymphatic glands are involved, epithelioma of the penis pursues exactly the same course as in any other organ or tissue of the body.

Dr. J. M. Barton: The clinical fact just referred to is borne out by a recent publication by Partsch, of Breslau. He has undertaken to follow out the results of operative interference in all cases of carcinoma operated on during a period of four years at the surgical clinic at Breslau. So far, he has examined carcinoma of the lip, tongue, vulva, and penis. About twenty-five per cent. of the operations on the lip are complete recoveries, while about fifty per cent. of operations on the penis have the same result. There were, however, only nine cases examined. One interesting fact in this connection was that in one case epithelioma had developed on the glans penis, and subsequently, directly in contact with it, a separate epithelioma developed on the foreskin.

Dr. O. H. Allis: I have seen a case bearing on the remarks made by Dr. Gross. In one case I removed the organ when the disease had progressed nearly to the root of the penis, and I could not get far from the seat of the disease. Here it returned in the course of six months.

Dr. J. H. C. Simes: In regard to the etiology of epithelioma I wish to make a single observation. I saw a case within a month or two in which the penis was largely involved. The patient stated that his wife had died a year before from cancer of the uterus. I do not know whether or not this had anything to do with the causation.

Dr. S. W. Gross: There is one point in connection with the operation which may be of interest. It would possibly be well, before amputating the penis, to inquire a little into the previous history, and determine whether or not the patient has had gonorrhœa. Not that this has anything to do with the etiology, but some years ago, at the Philadelphia Hospital, I amputated a penis for epithelioma in which the disease had made pretty extensive ravages, and removed the organ as close as possible to the pubes. Retention of urine followed. The resident physician introduced the catheter into the bladder with some difficulty. The man had a chill, followed by high fever, and died from urethral fever. The trouble was due to a stricture of the urethra. The autopsy showed surgical kidney on both sides. If the stricture had been detected previous to the operation I should have addressed my attention to it, and habituated the urethra to the presence of instruments before proceeding to amputation.

Dr. R. J. Levis: I would ask if the Fellows know anything about the transition or conversion of ordinary venereal warts into epithelioma. I have had two cases in which the disease followed venereal warts. In one the warts were repeatedly removed. In this case amputation of the penis was followed by return of the disease in the groin. As a rule, epithelioma of the penis occurs about the cervix, corona, and glans, the regions where venereal vegetations principally develop.

Dr. S. W. Gross: There is not the slightest reason why epithelioma should not develop in venereal warts or in the cicatrices caused by their removal.

Dr. Allis: I recall a case, in the Philadelphia Hospital, in which there was extensive condylomata, the patient afterwards dying of epithelioma.

Dr. Barton: It is not uncommon for epithelioma to follow papilloma of any kind, as papilloma of the cheek, where there is no suspicion of venereal origin or of malignancy. In the self-originating papilloma about the face and cheeks, especially in elderly people, it is almost the rule for them to degenerate into epithelioma if left long enough, while the papillomata occurring in children or the venereal warts of the penis of young adults comparatively rarely take on this action. I have seen mucous patches in elderly subjects become malignant and the patient perish from them.

Dr. Levis: In performing ordinary amputation of the penis, I believe that some benefit is obtained by performing what I would call a flap-operation. I first dissect out the urethra, and then make lateral flaps

of the corpora cavernosa, leaving the flaps pretty long. I then draw the corpora cavernosa together, passing the stitches all the way through. I next slit up the spout which I have made of the urethra, and after a time it will become rounded off. I think that by this method something is gained in respect to rapidity of healing.

FRACTURE OF THE PATELLA.

Dr. Levis: I have here a specimen of fractured patella, which illustrates very well the union which takes place. This is the only pathological specimen that I have been able to obtain after the use of the hooks. This case was treated five or six years ago. There is not bony union after healing of the fracture in this case, but the man was active, and walked without difficulty and with no lameness. I have, however, a number of patients walking about in whom I am sure there is bony union. I believe that it is a surgical axiom that a fractured patella can unite only by bony union through a continuity of the periosteum in front. To produce that union some appliance like the hooks must be used. The effect of the ordinary dressings is to tilt the fragments and separate them in front, so that the periosteum cannot unite. In the few instances in which bony union has occurred, there has been this continuity of the periosteum in front. Some specimens show a very slight continuity, and in some cases, where union has not been complete, there have been certain stalactite-projections from one fragment to the other, endeavoring to stretch across.

This specimen shows this gap in front, and it also shows that a patient can walk for a number of years with fibrous union of the fractured patella without any great amount of stretching of the uniting tissue.

This patella also shows that the patella is not a symmetrical bone,—that its upper and lower borders are not parallel,—so that pressure does not act with equal force on both sides, and while there is approximation on one side there will be a gap on the other side. Whenever I have had the opportunity of carefully adjusting the hooks, I have taken care to approximate the fragments on both sides.

I have been repeatedly asked in regard to the irritation produced by the hooks. Except in one case, there has been no great amount of irritation. This case was one in the Pennsylvania Hospital, where I adjusted the hooks myself. On the second night the man was attacked with ordinary delirium tremens, and ran about the ward in a furious manner, and was with difficulty restrained. While running about, the hooks broke, and the man fell. One of the resident physicians gave him ether and took out the hook. There was considerable inflammation about the knee-joint. The patient died from some complication.

Dr. S. W. Gross: This case recalls one which I recently treated, in which I used the apparatus of Agnew, but I think that the hooks would have been better. The fracture was due to direct force, the gentleman being thrown from a sleigh. As a result of treatment, the upper fragment has been depressed and the lower one rides up. On one side of the patella there is close union, but on the other side there is separation of about half an inch. I believe that where the fracture involves the upper portion of the patella it would be better to use hooks than to use the ordinary forms of apparatus, which tend to depress the upper fragment and to allow the lower one to ride up.

I cannot admit the line of reasoning that bone is formed solely from the periosteum. I should think that the periosteum would play a very insignificant part in bony union of the patella. Wherever bone is formed it must come from osteoblasts, and these are present everywhere in bone, in greater or less quantity in different situations. They are present in the soft layer of the periosteum and in the medullary substance of the patella as in other bones, and it is a well-known fact that medulla does produce bone. It was this fact that induced some one to try to insert the medulla between the fragments and bring about bony union. Were the periosteum alone in contact, it seems to me that the bony union would be only on the surface, and that where there is complete bony union between the fragments it is due to the osteoblasts of the medulla.

Dr. Hunt: I think it a truth that where the structures lying beneath a broken bone are of more importance than the bone itself, ordinary union does not occur. In fracture of the skull there is no bone formed. So in the patella there is a fibrous substitute for the bone destroyed.

A great deal of trouble is caused by the attempt to draw up the lower fragment. All that is necessary is to sustain it in position. It cannot be moved upward one-sixteenth of an inch. It is much better simply to sustain it in position than to apply a strong force, which tilts it out of position.

I would like to ask if any one has seen much disability from fracture of the patella. I cannot recall a case in which the patient limped. Of course there are defects, but I do not know that they are any greater than after fracture of other bones.

Dr. Allis: To prevent ultimate separation of the fragments, prolonged rest is, I think, important, in order to allow the tissue to become thoroughly hardened.

Dr. S. W. Gross: Mitchell Banks, of Liverpool, a gentleman of great practical sense, has recently published a work of clinical experiences. In the treatment of fracture of the patella he dwells upon this point referred to by Dr. Allis. Under no circumstances does he allow the patient to use the joint

under seven months. He says that the idea of anchylosis from rest is all nonsense. From this long disuse the functional activity of the muscle must be impaired. Why would it not be well, under these circumstances, to use massage and electricity to develop the muscular fibre and allow the quadriceps extensor muscle to support the joint?

Dr. J. H. Brinton: The question has been asked in reference to the disability following fracture of the patella. I have seen two cases in which there was a marked interval between the fragments, which were separated at least four inches. One of these men played an important part during the war. He was a letter-carrier. He had all the ordinary powers of locomotion, but when he attempted to raise the leg to step up he failed. I think that this is where motion is wanting in these cases. Where there is separation of over half an inch I think that we shall find this disability; at the same time the man may have all the other motions. I believe that where there is fracture on both sides the patient cannot kneel. There is a bishop who is thus prevented from performing the motions peculiar to his office. I also know of a lady who suffers from the same disability.

Dr. Allis: The question arises, Why does the patella fracture? It is seldom fractured in athletes. The fracture usually occurs unexpectedly. The patient steps downward, and, not being prepared for the length of the step, falls. The patella is fractured, and that is the reason the patient falls, and not the reverse. Even if several months are allowed to elapse before the joint is used, I should not be surprised if the patient were lame, because there was a condition of enfeeblement in the limb before the fracture occurred. The fracture of the patella indicates previous weakness, and I should be disposed to give a doubtful prognosis in such cases, as subsequently a second fracture may be produced just above the first one, or in the other patella.

Dr. J. Ewing Mears: I desire to ask Dr. Levis whether in the cases which have come under his observation the fracture was due to direct force or was due to muscular action, and whether or not the method of production had any influence on the union which followed.

Dr. Levis: I do not think that fracture of the patella is often due to direct violence, except from gunshot injuries. I have never seen a fracture of the patella in which there was bruising of the skin over the bone. I have tried on the cadaver to break the patella with a mallet, and I find that it is necessary to batter the skin until it is all gone before the bone is broken.

Dr. Mears: The point which I wish to call attention to is one which is based upon the anatomical relations of the tendon of the quadriceps extensor femoris and the patella. Some anatomists claim that the tendon is inserted into the patella, while others regard the patella as a sesamoid bone developed in the tendon of the quadriceps. It seems to me that we should consider these facts in connection with injuries of this bone and the results of such injuries. If the tendon be inserted into the tuberosity of the tibia and the patella developed in the tendon, the tendinous structures are divided in fracture as well as the bone, and in such a case there will be marked separation, and it will be a more difficult case to treat than if the fracture be the result of direct violence, where the fibres of the tendon may be simply contused and not divided. In treating these cases it is desirable to consider the cause of the fracture.

In connection with the cases which have been described I desire to refer to one under my observation, of a lady with fractures of both patellæ, one occurring subsequently to the other, as so frequently happens. The first fracture was treated very carefully, but there was considerable separation of the fragments. A year subsequently she fell and fractured the other patella from direct force. A curious feature of this case is that while the lady can readily walk up-stairs, she has to come down backwards.

Dr. Brinton: The cause of these fractures can be determined by a study of the articulation. I agree with the view that fracture of the patella is seldom the result of direct force. I have seen it result in this way where the patella has been struck against a largely projecting body. Perhaps in nearly all the cases where the patient falls and the patella is supposed to be broken by direct violence, the fall has little to do with it. Fracture occurs only when the knee is in a particular position. When the knee is bent the patella rises on the condyles and the muscular force acts with a greater degree of power. The injury is often produced by the patient advancing the body to prevent a fall. In this way undue stress is thrown upon the uncovered portion of the patella, which is at the junction of the upper and middle thirds, and the bone is broken.

Dr. Hunt: As a matter of clinical experience, there is one thing bearing upon Dr. Mears's remarks: it is that fractures which are the result of direct force give much less trouble than those due to muscular action.

Dr. Allis: One remark in regard to the case referred to by Dr. Mears. I know of a patient who had double synovitis with displacement of both patellæ for some time. He can walk up-stairs, but comes down backwards. It seems to me that the explanation of this is that in going up-stairs one leg is made a firm support: one leg is straight while the other is lifted. Coming down-stairs, both legs are bent at the same time, and therefore a patient with this condition of the patella cannot come down-stairs face forward, although he can come down backwards.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held May 13, 1885, the President, JOHN A. WYETH, M.D., in the chair.

DISSECTING ANEURISM OF THE AORTA.

The specimen was presented by Dr. E. G. JANEWAY, in behalf of a candidate.

FOUR SPECIMENS OF CANCER OF THE RECTUM.

Dr. A. G. GERSTER presented four specimens illustrating different stages of cancer of the rectum. The first patient was a man aged 34, the second a woman aged 54, the third a man aged 64, and the fourth a man aged 65 years. In the first case the patient made a good recovery, and six months subsequent to exsection of the rectum with the cancerous mass a plastic operation was done for incontinence of fæces. The woman died of pneumonia about three weeks subsequent to the exsection of the rectum, and death seemed not to be due to the operation. The third patient had a very narrow pelvis; much difficulty was experienced in performing the operation, and the stitches retaining the stump gave way, the wound became infected, and the patient died. In the case of the other patient his condition did not justify exsection, and consequently the lower end of the gut was split and the cancerous mass scooped out. The relief from symptoms was very marked. In all the cases there had been copious hemorrhage. The wounds after the operation were packed with iodoform. The patients had previously been prepared for the operation by regulated diet and mild cathartics; but, nevertheless, in the aged subjects some trouble was experienced from the passage of hard fæcal masses subsequent to the operation.

In some general remarks Dr. Gerster said that cancer of the rectum was divided into two groups, the epithelial and the adenoid variety. In the former cases the disease was less malignant; it tended to spread superficially and not by metastasis; nor was there danger of early return after extirpation. In the second group the disease was quite markedly malignant; it invaded the deeper tissues, spread by metastasis, and was liable to return after exsection. There still existed a difference of opinion among surgeons with regard to exsection in this class of cases, but Dr. Gerster rather favored it. All of the four cases narrated were of the adenoid variety. Regarding the etiology, in each of these cases the patient had been in the habit of using the syringe daily, and the right hand was employed, directing the syringe towards the left side, the side on which the disease began. Dr. Gerster had also observed that in many cases of ulceration, papillary growths, etc., involving the rectum, the rectal syringe had been used and was regarded as the cause of the disease.

The PRESIDENT said it was ordinarily stated in text-books that cancer of the rectum occurred most frequently in females, but his experience was to the contrary.

Dr. GERSTER had seen twenty-one cases of cancer of the rectum, and this number was about equally divided between males and females.

INJURY OF THE SPINE.

Dr. L. H. SAYRE presented a portion of the upper lumbar vertebræ removed recently from the body of a man aged about 35, who, in the winter of 1881, while driving a wagon, was thrown over the dashboard, sustaining an injury of the spine. He was also exposed to inclement weather at the time. From this date the man began to suffer from pain in the back, extending down the legs, some degree of rigidity of the muscles, etc., symptoms which pointed to some spinal injury. He was sent to Dr. Sayre by Dr. Janeway, who had found signs of commencing Pott's disease and of myelitis. The diagnosis was confirmed by Dr. Sayre, who applied a plaster-jacket and a jury-mast. The case was taken into the courts, and several eminent neurologists testified in behalf of the defendant that there was no injury of the vertebræ, and claimed that the symptoms were altogether due to a myelitis of the cord. Some time before death tubercles developed in the larynx and lungs, and just prior to death the attending physician diagnosticated tubercular meningitis. There had been apparently very slight prominence of the last dorsal vertebra. The autopsy revealed tubercular meningitis, pulmonary meningitis, and tubercles in various portions of the body. There was a pelvic abscess which communicated with two abscesses in the upper lumbar vertebræ. There was no outward deformity of the spine.

Dr. JANEWAY remarked that this case illustrated the fact that the physician could not exercise too great care in diagnosis in cases of railroad accidents and injuries due to like causes. For instance, the physician was liable to make a mistake when he asserted that accidents could not give rise to injury of the vertebræ. In the present case the gentlemen who testified for the defendant not only claimed that there was no injury of the bony column, but they also differed in their view regarding the part of the spinal cord which was affected, some claiming that there was posterior spinal sclerosis, others lateral, and others multiple sclerosis. It was this diversity of opinion among the witnesses for the defendant which resulted in the plaintiff obtaining such high damages.

Dr. GIBNEY had been much interested in the history of the case, inasmuch as he at present had a case under care in which the patient had sustained an injury of the spine,

the symptoms, however, not being very marked or definite. But the case related by Dr. Sayre showed plainly that more serious symptoms might develop after some months.

The PRESIDENT had once effected a compromise between the contending parties in a lawsuit in which the plaintiff had sustained an injury of the spinal column while running an elevator, the symptoms being those of myelitis and fracture of one or more vertebræ. There was paralysis of the bladder and rectum and of muscles of the leg. At present, several years after the accident, the patient was apparently perfectly well.

THE PATHOLOGY OF DEATH FROM ETHER-INHALATION.

Dr. AMIDON had been making some experiments regarding ether-narcosis in the lower animals, and presented the viscera of a cat which had died from ether-inhalation. There was congestion of all the abdominal viscera, collection of blood in the veins and right side of the heart, while the left side of the heart was empty. The point which he specially desired to make was the fact that death from ether was not due, as the books generally stated, to cardiac poisoning, but to respiratory failure. In the present case the right auricle showed contractility five hours after death. In a paper which he had read before the New York Surgical Society he had pointed out the value of atropine in ether-narcosis, and besides this method of treatment artificial respiration should be resorted to. He would not inject ether into the circulation. In several instances in which there was apparent death he had restored life in the lower animals after etherization by opening a large vein or cutting into the liver.

Dr. JANEWAY thought that usually where death had taken place during etherization in the human subject it was due to obstruction of the air-passages by vomited matter. He had on several occasions aspirated the right side of the heart after the organ had ceased beating, death being apparently due to stagnation of blood on that side of the heart. He had not reported the cases, because his experiments had not as yet been attended with success. In one case in which he aspirated the heart while it was still acting, no damage resulted.

Dr. GERSTER said he had once lost a patient during etherization, there having been prior to the operation marked dyspnœa due to a large goître and to chronic catarrhal process in the lungs. He was unable to revive the patient. The autopsy showed also that there had been some heart-disease. In another case his efforts to produce artificial respiration were attended with success. The operation was for sarcoma of the ribs, involving the pleura, and accidentally, when the pleural cavity was opened, air found unrestrained entrance, causing dyspnœa and apparent death: the heart and lungs ceased to act. Four minutes by the watch elapsed before artificial respiration caused renewed action in the heart, and seven minutes had elapsed before the respiration commenced.

The PRESIDENT remarked that he had once restored respiration fifteen minutes after it had ceased, the time being estimated by a number of by-standers.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held June 4, 1885, A. JACOBI, M.D., President, in the chair.

CONTAGIOUS OPHTHALMIA IN OUR ASYLUMS AND RESIDENTIAL SCHOOLS.

Dr. RICHARD H. DERBY read a paper with this title, which gave the result of his observations in twenty-four institutions visited since his report of the condition of three institutions to the County Medical Society in 1884, and he also urged upon the members the necessity of some step towards preventing contagious ophthalmia from spreading among the inmates of such institutions. In the twenty-four institutions visited there were 7440 inmates, 1428 of whom had sore eyes, or nearly one in every five. It was shown that in those institutions where each of the children had its own comb, brush, towel, bathed separately, and slept alone, and there was plenty of light, ventilation, and healthful food, there were comparatively few cases of the disease, while in those where the children washed in one common trough, used towels and brushes, etc., indiscriminately, a large percentage had the disease. In some it is the custom, when a child has a severe form of ophthalmia, to send it to its parents for treatment outside,—evidently a great injustice, as the parents are often unable to care properly for the child and the disease might be spread to the neighbors. In many cases it becomes an advantage to an institution to receive as many children into its walls as possible, and thus overcrowding is encouraged. Dr. Derby recommended that under no circumstances should a child be received into an institution until a competent physician has examined its eyes, and whenever a case of contagious eye-disease occurs in an institution the Board of Health should see that it is isolated and receives treatment. Not only should the eye-disease itself be treated locally, but the patient should be supplied with food of good quality and in sufficient quantity, and should have pure air. No less precaution should be taken in cases of contagious ophthalmia than was now taken in cases of scarlet fever, measles, etc.

Dr. H. KNAPP said he had listened with deep interest to the statements of the speaker, and they should in no way be underrated. He had been connected with a number of in-

stitutions as ophthalmic surgeon, and knew that in a number of them, and perhaps at certain periods in all of them, contagious ophthalmia existed. Sometimes the spread of the disease had been so great that the authorities of the institutions were forced to close them and to farm the inmates out. But he could, on the other hand, state that in many of the institutions the greatest care was taken to stamp out the disease. He mentioned the Catholic Protectory in particular, where, when an epidemic broke out, they called physicians and sought in every way possible to stamp out the disease, and its spread was largely controlled. But where an institution was once invaded, a number of cases were liable to continue for a long time. Two institutions never admitted a patient with eye-disease until they had received a certificate from him that the disease was not contagious. These institutions were remarkably free from eye-affections. He thought the suggestion of the author of the paper regarding inspection of all cases of eye-disease in these institutions a good one, and believed that if a competent physician were engaged to make a monthly report of the condition of the eyes of the inmates, at least large epidemics would be avoided. In this seemed to be the nucleus of the paper, and he knew of nothing more philanthropic which could engage our attention.

Dr. D. B. St. John Roosa said that this afternoon, at the request of the physician to the asylum, he examined the eyes of two hundred and forty-two inmates of one institution, and found sixty-seven cases of conjunctivitis. These children were under as good care as they could have, thanks to the labors of the author of the paper, except that there was not isolation. But he said the authorities of the institution were not altogether to be blamed for the existing condition of things. If there were any power in the Board of Health to correct such matters, it was its urgent duty to enforce its power. Children suffering from eye-disease were often forced upon the managers of asylums in a manner that they could scarcely resist granting them admission. The writer had observed with great propriety how very wrong it was to send these children back to their already overworked parents or guardians with the hope that they might remedy the evil. The remedy was easy. The tax-payers should pay for a hospital where patients suffering from contagious ophthalmia could be sent and retained until cured and then be returned to the institution without danger of spreading the disease. This subject was one deserving the consideration of political philanthropists, and the Board of Health should insist upon the erection of a suitable hospital, and it would be found, as it had always been found in like cases, that the people of New York would willingly support deserving charities.

Dr. Oakman, of Nyack, said that during the winter the authorities of the institution at that place, where about one hundred inmates were admitted, failed to isolate certain cases of eye-trouble which he advised should be done, they claiming that the disease was the result of cold. In order to keep the inmates warm, they were huddled together in an ill-ventilated room, and the result was that in the spring there were forty-four cases of catarrhal trouble of the eyes; seven patients had acute granular trachoma, and one purulent ophthalmia.

Dr. C. R. Agnew said his interest in this matter began nearly thirty years ago, when he saw a great many cases of contagious conjunctivitis during a famine in Ireland, and to this day the disease was quite common in that country, having started from overcrowding in poor-houses and other public institutions. He referred to a school in this city where contagious ophthalmia was communicated to eight-tenths of the inmates, probably largely by the habit of washing in one trough. They were also insufficiently fed, and several slept in the same bed. A remarkable change for the better took place when they were placed in tents and given four hundred quarts of milk a day instead of fifteen quarts. Dr. Agnew said he had great faith in the effect of agitation in bringing about a reform of abuses, and it was not always wise to go to legislation; but in this case he thought something should be done by the State authorities. It should be required of those who were about to found an institution to lodge a certificate with proper authorities, showing that they had made proper provision for air-space, shelter, food, and medical attendance for a certain number of inmates, and it should be made impossible for such institutions to receive more persons than the number for which they had the lawful accommodations. This was quite as possible as to regulate the number of passengers which a ship of given measurements should carry. The large majority of children in these institutions having chronic conjunctivitis never recovered, and they went to make up that large body of drifting, despairing creatures who infested our towns and cities.

Mr. Gerry, of the Society for the Prevention of Cruelty to Children, explained the manner in which commitments were made to these institutions, and said that, with certain exceptions, many of the institutions where the children were sent were entirely under the control of persons who had no knowledge of medicine or even of nursing, and there was no provision in the law which required them to seek the advice of a physician. Unless they were required to submit to the judgment either of a medical board or of some competent medical man, they would always have in their institutions cases of contagious ophthalmia. He was entirely in accord with

the views expressed by Dr. Agnew, and thought that something should be done by law to provide for an oversight of these institutions by medical authorities. He thought, so far as an ophthalmic hospital was concerned, that the remedy was simple: Let the State pay liberally for the care of such cases, and they would find proper isolation and treatment. The difficulty with regard to the Board of Health was that it was a quasi-political body. It already had its hands too full of work. It had not the means, and when money was asked for it was put off with the reply that it was always calling for money. One objection to an ophthalmic hospital was that the people would feel that as soon as a child was sent there its condition was hopeless.

Mr. Muller, of the State Board of Charities, explained the duties of that Board with regard to recommending the establishment of institutions organized by private individuals, and said that while such institutions usually started out with favorable conditions, it was only a short time before they began to receive children faster than they were able to provide accommodations for them. Then there were institutions which were considered absolutely safe, being under the highest medical supervision, and yet ophthalmia would break out.

The President said it was apparent from the remarks which had been made that it was almost impossible to keep contagious ophthalmia out of institutions. The same was true of every other contagious disease: they all made their appearance at times in institutions crowded with inmates. All of these institutions were meant to do good, and all did at the same time a great deal of harm. Where there were many children there were many opportunities for danger. Measles usually was a very mild disease, but when it broke out in public institutions it became very dangerous; and the same was true of all contagious diseases. They were more fatal when present among the inmates of crowded institutions. In an eye-hospital a mild case of ophthalmia would become a very severe one, and he was not sure that much good would come from a hospital devoted specially to those cases. The question would finally arise whether public institutions where large numbers of persons were accumulated would be allowed to exist at all. If the children gathered in those which at present existed were farmed out, it would be much better for them.

Dr. W. F. Mittendorf said it was difficult to make the public understand two points with regard to contagious ophthalmia: first, its great danger to the eyes, and, second, the length of time it required to cure it. He had had much to do with asylums, and he thought with the President that the crowding of children together in institutions was a great source of danger. In certain institutions where the inmates lived in cottages he had seen little of eye-disease. Another point which was too often overlooked was the extreme contagiousness of the affection. It was because of its great liability to spread that the eye-institutions in the city did not like to accept cases of contagious ophthalmia into their wards. The suggestion of the President was, it seemed to him, the best that could be adopted,—namely, to put as few inmates into one building as possible.

Dr. Agnew offered the following resolutions, which were unanimously adopted:

"*Resolved*, That it is necessary and expedient that steps be taken to prevent the occurrence of communicable eye-diseases in schools and asylums of New York and vicinity.

"*Resolved*, That the Council of the Academy be requested to take the matter of the paper into its immediate consideration, to obtain the co-operation of the writer of the paper, of the Society for the Prevention of Cruelty to Children, of the State Board of Charities, of the State's Charities Aid Association, and others interested in the subject, for the purpose of lessening the prevalence of communicable eye-disease."

Dr. Roosa wished to say a word or two in favor of the hospital plan, which had been pretty generally criticised. He still thought that, taking things as they were, and not as they would be in Utopia when we should get all the children farmed out among benevolent Christian people, it was best to isolate the cases of contagious conjunctivitis found in our institutions and give them suitable treatment, which could best be done by having an ophthalmic hospital to send them to. So long as the institutions existed there would be cases of ophthalmia, and it was desirable that such cases should be separated from the healthy inmates. Such patients stood a very fair chance of being cured when properly cared for.

Dr. R. P. Lincoln then exhibited a new electric laryngoscope and otoscope and illuminator of dark cavities, invented by Dr. Starr, of Philadelphia; also a convenient storage-battery. The instruments he had found to be the most convenient of any which he had employed.

Dr. Jarvis raised the question of priority.

Open-air Treatment of Diphtheria.—Dr. Bontecou writes to the *Journal of the American Medical Association*, advocating the open-air treatment of diphtheria, and locally dilute chlorine water, with compound tincture of iodine added, to the fauces, and internally drop doses hourly of glycerin (p. 2), iodine, acid. carbolic. (each 1 p.), the patient lying in the prone position. There is no danger of the patient's taking cold.

REVIEWS AND BOOK NOTICES.

A Manual of Dermatology. By A. R. Robinson, M.B., L.R.C.P. Edin., Professor of Dermatology in the New York Polyclinic, etc. New York, Bermingham & Co. 8vo, pp. 647.

"This volume is intended to be the basis of a future much larger, more pretentious, and more original work." So says the author in his preface, and we can only hope that his intention may be happily carried out at no distant day. For, as Dr. Robinson is known as one of the most original investigators in the histology of skin-diseases in this country, the more of his own work we have the better will it be for the renown of American dermatology. That portion of the present compendious work which deals with the pathological histology of skin-diseases is the best and most interesting. The rest is very much like other compilations. What the author set out to do—namely, "to present to the subscribers of Bermingham's Medical Library a concise account of our present knowledge of the subject of dermatology"—has been well and conscientiously done, but without evident enthusiasm. The book bears, to our mind, too much the impress of the German school. A more independent and eclectic spirit is desirable in an American work. Dr. Robinson is very severe on the classification of the American Dermatological Association, of which he says that it "should not have seen the light." After such an assertion, we are surprised to find that Dr. Robinson's classification is, with few exceptions, practically the same! A casual comparison would make them identical, but closer inspection reveals differences which we cannot believe of vital importance. A. V. H.

A Text-Book of Hygiene. A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Stand-Point. By George H. Rohé, M.D. Baltimore, 1885. 8vo, cloth, pp. 324.

This treatise on hygiene has been prepared with the aim of placing in the hands of the American student, practitioner, and sanitary officer the principles of preventive medicine. It is very appropriately dedicated to Prof. H. I. Bowditch, "the pioneer in the field of preventive medicine in America." The topics discussed are, first, the air, water, food, soil, removal of sewage, construction of habitations, hospitals, and schools; secondly, industrial, military, marine, prison, and personal hygiene; thirdly, the germ-theory of disease, contagion and infection, history of epidemic diseases, antiseptics and disinfectants, and disposal of the dead; and, finally, quarantine and vital statistics.

The author of this text-book is to be congratulated upon the success of his undertaking. Although aiming to furnish in compendious form the principal facts of sanitary science from an American stand-point, it must not be inferred that he has confined himself to American authorities. On the contrary, a careful examination shows his familiarity with recent literature of hygiene, and we find the latest knowledge upon the subject is communicated in brief and direct terms. The book is well written, concise, and comprehensive, and its teachings are based upon sound principles and good practice. In a subsequent edition more attention might be given to the presence of disease-germs in the soil of cemeteries (notably the observations of Dr. Domingos Freire regarding cryptococcus xanthogenicus), cemetery-drainage as a source of contamination of water-supply, mushroom- or sausage-poisoning, and poisonous coloring-matter in candies.

The Physician Himself, and what He should add to his Scientific Acquirements in Order to insure Success. By D. W. Cathell, M.D. Fourth Edition. Baltimore, 1885.

The success of this little work by Dr. Cathell shows that he did not err in supposing that an essay on personal questions in medical practice would be of decided benefit to numerous members of the profession. The subjects treated are those of every-day experience, and the advice given is temperate, timely, and trustworthy. Every young practitioner would be made a wiser—not necessarily a sadder—man by reading it, while older ones will find in its pages a reminder of some of the difficulties which they encountered unaided in their early experience. In preparing this edition, opportunity has been improved of revising and adding to its contents. We regret that the advice given on page 123 was not expunged, as it approaches quackery too nearly. We should avoid even the appearance of evil. However, it is not surprising that some parts should meet with criticism: the wonder is that there is so little to condemn amid so much to praise. It is handsomely printed on good paper with clear type, and is a very readable book.

GLEANINGS FROM EXCHANGES.

Pathology of Diabetes Mellitus.—In a paper entitled "Some New Considerations on the Pathology of Diabetes Mellitus," Dr. William H. Porter (*New York Medical Journal*, April 11) discusses the microscopic changes of the glandular organs removed from a diabetic subject, which suggest a new view of diabetes. The starting-point of the disease may be considered as excesses in eating, by which is meant such a physiological increase in the nutritive material,

both hydrocarbons and proteids, as to keep the liver-cells constantly overworked, thus exciting a condition which renders them incapable of performing their normal work. Glycosuria has been produced by overcharging the portal blood with glucose or cane-sugar. Pavy showed that the injection of oxygenated blood into the portal circulation leads to a superoxygenation, which apparently increases the amount of work on the part of the liver, and is followed by glucose in the urine; and Schiff excited the same condition by galvanization of the liver.

From these observations Dr. Porter is led to suggest that "the excessive imbibition of nutritive elements into the portal circulation must of necessity call for a super-oxygenation of the portal blood; and in this way additional work is called for on the part of the hepatic cells; consequently the capillaries are dilated to furnish the necessary material to carry on the excessive metabolism; and in this way this peculiar disease may be and is developed by material processes as well as experimentally. It may be that the increased demand made upon the liver is transmitted by the sensory filaments of the sympathetic to the hepatic medullary centre, which produces either deficient or excessive stimulation, as the case may be, with a like result transmitted back to the liver, which is followed by incomplete or undue activity on its part, instead of just the requisite response and a complete metabolism."

Cerebral lesions may also in some cases interfere with the nervous mechanism of the liver, and bring about the same changes in the capillaries and hepatic cells resulting in incomplete or excessive transformation in the liver; but traumatic diabetes tends to recovery, whereas there seems to be a necessity for surcharging the portal system with nutritive materials in order to produce permanent diabetes. The glycosuria of pregnancy or of lactation is attributed to peripheral circulation.

The frequency of the renal lesion in diabetes, and the absence of excess of sugar in the blood at a recent necropsy, suggest the view that glucose is not produced and discharged as such into the blood from the liver, but that sugar-forming elements are produced which circulate in this incomplete state in the blood, and so on through the kidney, where they are acted upon by the renal cells and discharged as fully-formed glucose. The result is a neurotic condition of the renal epithelial cells, and parenchymatous metamorphosis, due to excessive amount of work. This also explains the condition of the kidneys in old cases, which are usually attended with albuminuria and casts. The small amount of albumen may be explained upon the theory that some if not a considerable quantity of the glucose is produced from the albuminurias, and that the sugar represents what otherwise would be eliminated as albumen, urea, carbon dioxide, and water. The copious amount of urine is attributable to the close relationship existing between the sympathetic nerves of the liver and kidneys, thus explaining the primary dilatation which is maintained by subsequent vascular degeneration, which destroys the elasticity of the vessel-walls. The result is that all power of regulating blood-pressure upon the glomeruli is removed, and the increased hydrostatic pressure forces a very large quantity of water through. This vascular degeneration and dilatation are found in both the liver and the kidneys. The practical points of interest in this communication are that diabetes mellitus has for its primary cause a change in the portal blood and in the hepatic tissue and vessels; that the influence of the nervous system is secondary and not primary. The line of treatment, therefore, should be to reduce the amount of work thrown on the liver, by regulating the diet. The circulation should be steadied so that vascular tension shall be kept as even as possible, and the nervous system should not be neglected, but treated symptomatically, in order to keep it as nearly normal in its functions as possible. When treatment is instituted early, good results may be hoped for.

JAUNDICE FROM ARSENICAL WALL-PAPERS.—In the *British Medical Journal* (June 20) are reported six cases of jaundice among the children of one family, ranging in age from 9 to 18 years. The symptoms began acutely with vomiting, furred tongue, tenderness in the epigastric region, and icterus, all of which passed away in from one to two weeks. It was found that the paper on the walls of the play-room and dining-room contained in its pigments a large proportion of arsenic.

MISCELLANY.

THE NEW JERSEY STATE MEDICAL SOCIETY held its One-Hundred-and-Nineteenth Annual Meeting June 9, at Long Branch. The officers elected for the ensuing year are:

President,—Joseph Parrish, M.D., of Burlington.

Vice-Presidents,—Charles J. Kipp, M.D., of Newark; John Ward, M.D., of Trenton; H. Genet Taylor, M.D., of Camden.

Corresponding Secretary,—William Elmer, Jr., M.D., of Trenton.

Recording Secretary, — William Pierson, M.D., of Orange.

Treasurer,—W. W. L. Phillips, M.D., of Trenton.

Standing Committee,—I. J. Smith, M.D., E. J. Marsh, M.D., D. C. English, M.D.

The next annual meeting will convene at Spring Lake on the second Tuesday in June,

1886. Dr. D. McLean Forman is the chairman of the Committee of Arrangements.

THE CHOLERA IN SPAIN.—Accounts from Spain tell of an alarming increase in the number of cases of Asiatic cholera, especially in the province of Murcia, where the people are said to be especially ignorant, bigoted, and dirty. The papers also state that the officers of the Sanitary Board, in making house-to-house visitation, in using disinfectants, and trying to promote cleanliness, are meeting with great opposition. Dr. Ferran, on the contrary, is continuing his alleged protective inoculations upon increasing numbers in Valencia. These inoculations are especially attractive to those who wish to be assured against cholera, and yet do not care to take the necessary trouble to put their persons or their homes in proper hygienic condition. The fact that cholera is neither contagious nor self-protective, and that its pathogenic cause resides in the intestine and not in the blood, so far as has been ascertained, would seem effectually to forbid any hope that it is a disease from which immunity can be obtained by inoculation. It is more likely that such injections would cause septicæmia than that they should either originate or prevent attacks of true cholera.

NOTES AND QUERIES.

Dr. E. G. Waters, of Baltimore, Maryland, writes us an interesting note concerning the frequency of paracentesis for ovarian disease. He refers to a lecture published in the *Times* under date of October 4, 1884, in which Mr. Tait is represented as saying, "I remember that I saw in the county of Hants a tombstone that bore an inscription declaring that the deceased had been tapped for ovarian dropsy forty-seven times. Being on a tombstone, of course it must be true; if so, this is the largest number of tappings on record." * * *

"This is an extraordinary statement for so eminent a man to make, and must be considered chargeable to that form of *hiatus animi* which so constantly occurs to speakers unpractised in giving expression to their thoughts, as Mr. Tait tells us he actually was. Reference to the 'Practice of Medicine' by his distinguished countryman, Sir Thomas Watson, under the head of Ovarian Dropsy, furnishes the two following 'recorded' instances, each of which exceeds the case he gives in the number of times this operation was performed:

"'Dr. Mead narrates the case of a lady who, for the information of posterity, ordered by her will that the following English inscription should be engraved on her monument in Bunhill Fields:

"'Here lies Dame Mary Page,
Relict of Sir Gregory Page, Bart.
She departed this life March 4, 1728,
In the 56th year of her age.
In 67 months she was tapped 66 times; had taken away
240 gallons of water, without ever repining at her
case or ever fearing the operation.

"'Among authenticated instances, the most remarkable that I have met with is detailed in the *Philosophical Transactions* for 1784, by Mr. Martineau, who was at the time surgeon to the Norfolk and Norwich Hospital. An abstract of the case is given in the printed catalogue of the Hunterian Museum, where the cyst is preserved. It belonged to the left ovary of Sarah Kippus, a widow, 55 years old.

"'The complaint began after a miscarriage at the age of twenty-seven. From the year 1757 to August, 1783, when she died, she had been tapped eighty times, and had in all had taken from her 6631 pints of fluid, or upwards of thirteen hogsheads.'

"The subject is chiefly of literary and historical interest, but from these points of view is not without value. An esteemed professional brother who is always abreast with current medical literature said to me the other day, 'It's of no use to read old medical books. Time is thrown away in reading them.' Yet it is very evident from the above illustrations that timely references to them may sometimes save very able men from rash assertions."

[We are not certain but that the statement commented upon was a *lapsus* on the part of the reporter in making a positive assertion of what was merely intended as a passing remark, which unfortunately was overlooked by the lecturer in making a hasty revision of the proof just before sailing for England. The remark that Mr. Lawson Tait was not accustomed to medical teaching does not warrant the inference that he is not a practised speaker. On the contrary, he has had much experience in public speaking, although not as a clinical lecturer.—ED. TIMES.]

OBITUARY.

DR. EDWARD HARTSHORNE, a prominent member of the profession of Philadelphia, died at his residence, of nephritis, June 22. He was born in this city, May 14, 1818, and was the son of Dr. Joseph Hartshorne. Dr. Hartshorne graduated at Princeton, and afterwards received his medical degree from the University of Pennsylvania. He was connected at different times with the Pennsylvania, Episcopal, and various army hospitals, and was an active and devoted member of the College of Physicians. He was also connected with a number of special societies like the Philosophical and the Academy of Natural Sciences.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 21, 1885, *TO JULY* 3, 1885.

MAJOR ALBERT HARTSUFF, SURGEON.—Assigned to duty at Fort Hamilton, New York Harbor. S. O. 133, Department of the East, June 24, 1885.

MAJOR J. V. D. MIDDLETON, SURGEON.—Granted one month's leave of absence, with permission to apply for fifteen days' extension, to take effect about July 15. S. O. 88, Department of Missouri, June 19, 1885.

MAJOR H. E. BROWN, SURGEON.—Assigned to duty as post-surgeon, Fort Reno, Indian Territory. S. O. 91, Department of Missouri, June 24, 1885.

CAPTAIN F. C. AINSWORTH, ASSISTANT-SURGEON.—Relieved from duty at Headquarters Department of Missouri. S. O. 93, Department of Missouri, June 26, 1885.

CAPTAIN B. D. TAYLOR, ASSISTANT-SURGEON.—Assigned to duty at Little Rock Barracks, Arkansas. S. O. 139, Department of the East, July 1, 1885.

CAPTAIN BLAIR D. TAYLOR, ASSISTANT-SURGEON.—Ordered from Department of Texas to Department of the East.

CAPTAIN WILLIAM F. CARTER, ASSISTANT-SURGEON.—Ordered from Department of the East to Department of Texas.
S. O. 141, A. G. O., June 20, 1885.

CAPTAIN WILLIAM B. DAVIS, ASSISTANT-SURGEON.—Leave of absence extended three months. S. O. 142, A. G. O., June 23, 1885.

FIRST-LIEUTENANT R. G. EBERT, ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect about July 5. S. O. 97, Department of Colorado, June 17, 1885.

FIRST-LIEUTENANT R. L. ROBERTSON, ASSISTANT-SURGEON (now on leave of absence).—Directed to report in person by July 7, 1885, to commanding officer, Columbus Barracks, Ohio, to accompany detachment of recruits to Department of Texas. On completion of this duty, to rejoin his proper station. S. O. 143, A. G. O., June 24, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM JUNE 21, 1885, *TO JULY* 4, 1885.

BRANSFORD, JOHN F.—Commissioned as surgeon on active list, June 16, 1885.

ROSS, J. W., SURGEON.—Detached from Naval Laboratory June 30, 1885, and waiting orders.

SHAFER, JOSEPH, ASSISTANT-SURGEON.—For duty on board the U.S. Receiving-Ship "St. Louis," League Island, Pennsylvania, July 10, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 25, 1885.

ORIGINAL LECTURES.

ON THE SURGICAL TREATMENT OF INFANTS.*

BY DE FOREST WILLARD, M.D.,

Lecturer on Orthopædic Surgery, University of Pennsylvania; Surgeon to the Presbyterian Hospital, etc.

YOUR committee having invited me to speak to you to-night upon the "Surgical Treatment of Infants," I purpose to confine my remarks chiefly to personal experience in the means of relieving the principal surgical difficulties which are met with during the first two years of life. If the subject shall occasionally lead me to mention older children, it will be because the line between infancy and childhood is not a marked and well-defined one.

As you are all active practitioners also, it will be unnecessary for me to dwell upon detail, and I shall only touch upon practical points in treatment. The surgery of childhood, as compared with that of adult life, is, aside from congenital defects, sufficiently marked and distinctive to entitle it to separate consideration.

First of all must the children's surgeon acquaint himself with the anatomy of the child. This is rarely done, as the ordinary adult-dissections during a college course give little idea of the size and position of the individual elements as seen in the infant. In consequence of ignorance upon this practical point, many grievous failures have occurred. After unusually large opportunities for the study of both normal and abnormal tissues in the diminutive frame, I am still frequently surprised to note the exceeding smallness of different organs and canals.

Another essential element in the surgeon is tact in the management of the little ones, especially when dealing with those between the ages of two and ten. In hospital cases but little history is attainable, and much depends upon quick perception. Naturally fearful of pain, the patient's mind must be diverted and engaged, or great difficulties in diagnosis will often occur from the fright and struggling. The operator not in sympathy with children can never secure their confidence. Much will often be gained by quiet observation. It is not a month since my opinion, which at the first few moments of the consultation had been favorable to tracheotomy, was changed by five minutes of close watching, and the result proved the correctness of the procedure. To the person, however, who will carefully study individuality as well as disease, no department of medicine offers so pleasant a return for his labors. My personal experience with children has perhaps made me more hopeful in regard to the power of such individuals to endure pain, shock, and disease than would be indicated by the expressions of other authors; but to me there is no domain of surgery so attractive and gratifying as the treatment of children below the age of puberty. Their natural condition is that of hopefulness, and as soon as the depressing influence of shock, pain, or fear is removed, the normal resiliency of mind and body asserts itself with such rapidity that the results are often surprising.

Again, a child has only inherited taints of constitution to contend against: his viscera are ordinarily in a healthy condition. An adult has not only hereditary, but all the acquired vices occasioned by misuse or abuse of any organ or sets of organs, a circumstance which often turns the scale in the struggle between life and death. Take, for example, the single instance of the outraging of tissues by either the moderate or the excessive use of alcohol, and every surgeon will testify that even slight wounds may in such an individual quickly develop a fatal attack of mania-a-potu.

Tetanus is not more frequent in infants than in adults, notwithstanding the tendency of the former to nerve-excitability.

In regard to anæsthesia, my experience is that great benefit is obtained by the use of ether when pain can thereby be prevented. In the first weeks of existence I admit that a feeble vitality would contraindicate its use, although I have successfully administered it to a three-days-old infant. After the first or second month I see no reason why we should needlessly inflict pain upon an infant simply because we can control it by brute force. In the examination of fractures great suffering is often inflicted by careless and frequent

* Read (by invitation) before the Philadelphia Obstetrical Society, June 4, 1885.

manipulation, and, unless the diagnosis is easy and positive, unconsciousness should be produced. No case of bone-injury should ever be passed by undetected when ether will aid us to solve the question.

In the opening of abscesses, the "primary influence" of ether is so readily obtained that it should be brought into use whenever practicable, as keenness of pain can thereby be avoided.

Fear plays an important part, and may depress the child's system even more than pain: hence great caution should be observed that all knowledge of any operative procedure should be guarded against. When the day for action arrives, let the surgeon quietly and gently state to the little one, if it has arrived at years of reason, just what it is proposed to do, at the same time assuring him that no pain will be experienced, and, if such words be followed by firm, speedy, and judicious management, much agitation and fear will be avoided.

All preparations should be made out of sight and hearing of the patient, and instruments need never be seen by him, except when a strong impression is intended to be made upon the mind of a masturbating boy requiring circumcision, in which case ether may also be omitted.

One word in regard to the method of anæsthetization. It is but natural that a child should be distrustful of any attempt to deprive him of consciousness, a fear which is greatly increased by the injudicious and greatly-to-be-condemned habit of many parents, who systematically threaten their offspring with the expression, "the doctor will come and cut your head off." A few kind words will often quiet the agitation, and simple directions as to the method of breathing will save many minutes of struggling resistance. With very young children the first smell of ether may be masked by permitting them to see cologne poured upon the towel, after which ether may be quietly added, and they will feel that it is a perfume that they are breathing. This device has frequently served me a good purpose. I always allow a good admixture of fresh air for the first moment; but when the child actually begins to cry, then quick action answers best. The towel should now be well saturated, and held firmly over nose and mouth until two or three strong screams and inhalations will yield a full primary impression, which can be gradually followed up to complete anæsthesia with safety.

Should any symptom of ether-narcosis occur, it is so easy to depress the head of a child or to perform artificial respiration by acting upon the ribs that serious accidents are infrequent. Subsequent vomiting is very common, but is not persistent, and is easily quieted by a small hypodermic of morphia, a procedure which ordinarily brings quiet sleep to the patient. If the child is feeble, I always allow milk up to within two or three hours of the operation, and then administer wine or whiskey in water immediately before giving the anæsthetic. Milk with lime-water and whiskey is usually retained within ten minutes after the first vomiting on rousing. In tedious excisions, not only should preliminary precautions be taken to secure against prostration by shock, but hot-water bags should be ready for use, which, with hypodermics of brandy, may succeed in tiding over a temporary depression which would otherwise end in death. When the loss of blood has been great, especially in acute surgery, important assistance may be gained by transfusion, either of blood or of a warm saline solution.

Under the head of arrest of hemorrhage I would strongly advocate the use of animal ligatures, since the pain often incident upon the removal of threads greatly disturbs the needed quietude of wound and mind.

Thorough asepsis and antisepsis are especially valuable, since we not only secure the admirable results that are attainable by their use, but are also enabled to disturb the child with far less frequency. I am now treating a girl with a railroad crush of the leg which would thoroughly have justified amputation, yet which, under corrosive sublimate dressings, has been disturbed only six times in as many weeks, even though extensive sloughing has occurred. Save upon one occasion, at the height of the process of tissue-death, the applications have been taken away perfectly sweet, and the child has the promise of a reasonably good limb. In my *ante*-septic days I certainly was never able to carry a patient through such a process and keep the temperature (as had been done in this case) below 99½° all the time, and usually but slightly above 98°. With infrequent dressings the irritation of the child is but slight,

and, if pain be also absent, contentment is the rule under proper nursing.

I cannot too strongly emphasize the importance of this latter condition. A kind, quiet, gentle nurse is one of the most valuable assistants in the real progress of the case, especially during the first week following operation. Such care cannot be delegated to untrained and careless people: hence it is absolutely necessary that children should be in separate hospitals or in separate wards, under the best of care-takers. Even in private practice the mother is rarely the best nurse for a child past two or three years of age: a skilled attendant answers far better. In hospital practice I have often been surprised to see how contented and patient the majority of children of even three years of age will become if the mother maintains a judicious absence and the nurse is efficient and kind.

Another point which I wish most emphatically to declare to-night is the fact that congenital defects are most inexcusably and persistently neglected by even good practitioners, under the mistaken opinion either that nothing can be done or that a later period will be early enough. The consequence is that many unfortunates become helpless and hopeless cripples by their physician's advice, since, passing out of his sight and mind, the neglect engendered by his direction, "Wait!" is fostered by parents, ever ready to postpone a dreaded day.

Turning to some of the special surgical diseases of infants, I would say that it is my intention simply to touch upon a few points of treatment without regard to definite arrangement or order, since to consider almost any one of the conditions in full would require an entire evening's discussion.

In a new-born child, the first most probable trouble requiring surgical relief will be *imperforate anus* or *rectum*. Such a condition is not improbable when we remember that the intestine is formed as a closed tube. If the malformation be simply one of occlusion of the anus by a membrane, it would seem to be the easiest of procedures for any practitioner to make an opening; yet I have seen children permitted to die with the entire ischio-rectal fossa and perineum bulging with retained fæces, when a simple puncture through a membrane closing an otherwise normal anus would have given immediate relief. This timidity may perhaps be explained by the fact that occluded anus and imperforate anus are confounded with imperforate rectum and the case is given up as hopeless. In imperforate anus the operation is still a simple one, since a crucial incision, together with stretching of the mucous membrane to the skin and subsequent dilatation with the finger or probe, is all that is required.

When the anus is normal and patulous, but the rectum is occluded by a membrane or is actually absent, then a much more serious condition presents itself, the difficulty increasing in proportion to the extent of the deficiency. Should no meconium be passed within the first twenty-four hours, a careful search should be instituted. The little finger or a catheter passed into the anus will detect the obstruction, or, if the anus be absent, the vagina (if present) may be explored for the abnormal fistule. As soon as the presence of fæces can be discovered in the fossa, a careful dissection should be made, keeping well backward so as to avoid the vagina or the urethra and bladder. A catheter should always mark the position of the urethra. There is but little danger, even in deep incisions, if the region of the coccyx and sacrum be followed. The gut found should be drawn down as far as possible and secured, a channel being maintained through the lower rectal region, if necessary, by the finger or by bougies, the latter of which should not, however, be retained constantly in position. There is much less danger from subsequent hemorrhage if the external incision be free, and no fear need be entertained about the ultimate retention of the fæces, as, if the child escapes peritonitis and other inflammations, good control of the bowel is always secured; in fact, the chief subsequent danger lies in the formation of stricture. When the length of the bowel will not permit it to reach to the site of the anus, the new opening may be made nearer to the sacrum. Should no trace of the rectum be found within two inches of the anus, it is unsafe further to explore a region where peritoneum would be liable to injury. Either left inguinal or left lumbar colotomy should be performed. The right groin is to be selected if there are evidences of absence of sigmoid flexure. The left inguinal posi-

tion gives a better subsequent opportunity of passing a bougie downwards into the rectum and thus establishing a proper anus. If the colon be full, it will not be difficult to find. In cases of doubt, its distention by air or water through a hypodermic needle would determine its termination. Abnormal openings into the vagina, bladder, or urethra rarely require early operation, but in non-retention of fæces at a later age, Rizzoli's plan of procedure is a good one.

Later in childhood the surgeon is often compelled to treat another condition of the rectum,—namely, *prolapse*. This, if excessive and not yielding to replacement, astringent applications, hot-water bathings, and general constitutional measures, must be cured by the production of linear eschars by nitric acid.

The genito-urinary organs may also require attention immediately after birth. A simple occluded urethra is easily relieved by the careful introduction of a sound or catheter. *Epi-* and *hypo-spadias* and *exstrophy* of the bladder should not be allowed to go on to adult life without relief. As soon as the child has passed its dentition period a plastic operation should be attempted for relief, since the mental and moral effect of such a deformity has often a marked influence upon the lives of the unfortunates. *Adhesion* of the *vulva* or *nymphæ* should not be overlooked, since not only does the nervous system suffer, but the parts may be improperly developed. Separation can almost always be accomplished by the finger or by a probe. An absolutely *imperforate hymen* should never be allowed to remain, if discovered, since, at a later period, if permitted to impede the menstrual flow, serious and even fatal results may follow its division after the uterus and Fallopian tubes have become dilated by the imprisoned secretion. *Imperforate vagina* should receive at least careful diagnostic attention to detect the presence of a uterus, and, if not absent, fuller development will be secured if the passage can be opened during the first few years of life. With a catheter in the urethra and a finger in the rectum, a careful operator can explore safely. I have met with several cases in which the penis was preternaturally *short* and ill formed, the body of the organ during flaccidity being almost entirely concealed in the fatty tissues of the pubis. In such instances I have removed the prepuce during the first three months of life and have cut away all restricting bands of skin and connective tissue, sometimes even drawing beneath the penis an extra flap of skin when the corpus spongiosum has been short and dwarfed. By such means the fullest amount of growth is encouraged.

Adherent and *contracted prepuce* or *phimosis* has been the subject of much discussion in regard to the causal influence upon certain nervous manifestations. My views upon this subject have already been published,* and after two years of additional experience, during which time I have been brought daily in contact with this class of cases, I can reiterate what I then stated,—namely, that while more or less adhesion is an almost constant and normal condition, yet that when urinary, choreic, paretic, or any other nervous symptoms develop, a careful investigation should never be omitted, since a direct relation will in a certain number of cases be clearly evidenced, and removal of the cause will speedily cure the manifestation. The fact that even circumcision does not relieve the symptoms is undoubtedly true in many instances, and I have never claimed that preputial adhesion and narrowing was anything more than one of several factors which should be carefully scrutinized. I have only urged that its influence should not be overlooked; and when so simple an operation as stripping the prepuce from the glans by the thumbs or possibly by the use of a probe is all-sufficient, there can certainly be no argument against removing this one factor. My opinion in regard to the feasibility of drawing back the prepuce in young children, even when the opening seems scarcely pin-hole in diameter, has been greatly strengthened, and circumcision is only necessary when the simpler method described fails to secure a prepuce freely movable over a normal glans. Dilatation even is but rarely required, a few moments of continuous pressure soon revealing the mucous layer, adherent perhaps just about the meatus, which, when loosened, permits the head to pass through the opening, and the corona is freed with the thumbs. Should temporary paraphimosis occur, two probes or a hair-pin slipped beneath the constriction will easily permit replacement.

* Philadelphia Medical Times, June 30, 1883.

Congenital hydrocele rarely requires much surgical interference beyond an evaporating lotion of muriate of ammonia or alcohol, as a few weeks will often close the canal if hernia does not coexist, a fact which can be determined by non-translucency and capability of reduction. Should the connection with the peritoneum fail to close, puncture with the application of a truss will usually complete the cure. A hydrocele with closed canal is better treated by tapping and injection than by seton. The diagnosis between *encysted hydrocele* of the cord, *hernia*, and *undescended testicle* is sometimes difficult; but if the surgeon remembers that the former is simply a cyst in some unobliterated portion of the peritoneal coat of the cord; that its rounded shape can be detected if it is pulled well down into the scrotum; that it is usually translucent; that the impulse is not so decided as in the case of hernia; that it returns to the abdomen only by being pressed upward, and not with a slip and gurgle, he will rarely be led astray. A hernia may coexist with either of the above-mentioned conditions, but if non-adherent, careful isolation will settle the diagnosis. Should the hernia become strangulated or the non-descended testicle become inflamed and infiltrated, the most careful examination will be necessary. In retained testicle, its absence from the scrotum will be the first point in arriving at a decision; but even in such a condition the organ might be within the abdomen and an encysted hydrocele present, or the testis might, as has recently fallen under my notice, slip into the tissues of the perineum and be exceedingly difficult to discover. In the case just mentioned it sometimes requires numerous manipulations to cause the missing organ to return to its place in the pouch. Should hernia and retained testicle both exist, a double purpose can be gained by drawing the latter down and pushing the former up, and then applying a truss. The successful retention of the organ within the scrotum is a matter of great difficulty, and removal is scarcely justifiable in young persons unless pain or inflammation ensues. Extirpation, if required in later youth, will probably not interfere with the procreative power of the individual, since one gland will supply all requisite material and the affected one is practically useless from atrophy, even if it is not devoid of tubular structure. Traction is of little service, as manipulation tends to increase the sensitiveness of the organ. In prognosis it should be remembered that cryptorchism exists in nearly ten per cent. of males at birth, and that descent may occur within the next few weeks.

Simple *umbilical* and *inguinal hernia* should receive early attention, as, contrary to the rule in adults, a cure can often be effected during the first year of life by the persistent use of a truss. In young infants I prefer the hard-rubber variety, as more cleanly. The instrument should be applied during the first few weeks of life, and continued for one or more years. The treatment of strangulated hernia does not differ from that of the adult, but in obstruction of the bowels *intussusception* is so commonly the cause of the blockade that, unless violent peritonitis is present, laparotomy with careful search for the invagination offers the best hope of relief, and, I am glad to say, is rapidly growing in favor.

Meningocele, *encephalocele*, and *spina bifida* are complaints that will early require the surgeon's attention, or at least his expression of opinion and his prognosis. If attached by means of a narrow pedicle, constriction with an elastic band is feasible; but, unfortunately, this pedicle is but seldom found. Injection of iodine following tapping is rarely successful, yet is worthy of trial in so hopeless a case. In a large hydro-rachis of the lumbar region lately under my care, which resisted pressure, tapping, injection, and constriction, I was strongly inclined to excise the thin sac and attempt a plastic operation by drawing in towards the median line two flaps of skin from the lumbar region, leaving the vacancies to granulate. Soon after a consultation, in which I was dissuaded from my attempt, the tumor ruptured spontaneously, and death occurred in two days, although frequent tappings had never produced any nervous symptoms. I had then never seen a record of such a plan of procedure, but only last week I noticed in the *Journal of the American Medical Association*, vol. iv. No. 17, page 466, that Mr. Robson had performed this operation with successful results in two out of four cases. Strict antisepsis was enforced.

Cephalhæmatomata are usually easily distinguished from encephalocele or menin-

gocele, and also from the simpler tumor, *caput succedaneum*, the latter being exterior to the periosteum and more doughy. The blood in a cephalhæmatoma is always confined between the pericranium and the bone-substance, and increases until the second or third day. The hardened ridge around the border of the tumor may give the sensation of an opening in the bone, but the orifice in meningocele is rarely as large as the base of the swelling mentioned. The peculiar crackling feeling upon pressure at a later period is due to the new bone-deposits beneath the periosteum. Absorption so generally takes place in three or four weeks that aspiration or incision is unwise, even though antisepsis be thoroughly practised, unless in exceptional cases when suppuration is certainly present. Lotions have a good influence,—at least upon the brain of the mother.

Hare-lip will early require the careful study of the surgeon, situated as it is upon the portion of the body that is most regarded in the æsthetic point of view. Its proper relief therefore becomes a matter not only of surgical skill, but of surgico-artistic skill. The time for the performance of the operation is a point upon which there is a wide diversity of opinion. My rule is to relieve the deformity within three or four days if it interferes with the proper nursing of the child. Practically, I must confess, however, that by the end of the operation the milk has left the mother's breast, unless there is some other baby to maintain the flow. My preference is to wait about three months, until a full, vigorous activity of growth and cell-action is at work, and before the process of dentition has commenced. This period is selected not only for the reason mentioned, but also because the child cannot use its hands as freely as at a later period of infancy, thus avoiding risk of injury. In one patient, a year old, diphtheria appeared on the day following operation, and in his convulsions all the pins were twice torn entirely from their fastenings and the fresh wound became implicated. In spite of such complication, an excellent result was obtained by holding the parts in position for days with adhesive plaster cut in the form of a triangle sufficiently large to cover at its base the area from in front of the ear to the corner of the hyoid bone, with its apex prolonged at the width of the upper lip to meet a similarly-shaped piece from the opposite side. These sections were united by a small elastic ring, which maintained a constant pull upon the tissues of the cheek and controlled spasmodic muscular action. In fractious children I have now abolished pins and have substituted catgut sutures for the mucous surfaces, which, if of small size and tied in three knots, will remain in position until union occurs. For the skin edges I use carbolized interrupted silk sutures, my reason for stitching the surfaces separately being that there is less linear depression of the cicatrix and less constriction of tissues is thereby exercised than by pins and figure-of-eight, while if each set penetrate half-way through the lip antero-posteriorly the sphincter is thoroughly controlled. One of the stitches should pierce the coronary arteries. To prevent any pouching of the flaps or separation of the deeper parts by oozing, horse-hair drainage for a few hours answers the best purpose. Additional control of muscles should be given by adhesive plaster prepared as above indicated, or by strips, which should not only be applied transversely, but, in order to prevent strain, should commence upon the neck on either side, in front of the sterno-mastoid near the cornu of the hyoid, and run thence just above the angle of the mouth across the opposite malar to the front of the ear. If these are all put in position while the surgeon pinches the cheeks well together, he will find upon releasing his grasp that the minimum of tension is exerted upon the stitches. A still better plan is to have the nurse regulate this muscular action for the first few days by pressure whenever the child cries or eats. Only by securing union by the first intention can we hope to have a narrow cicatrix: hence I do not allow the child to suck, as is the practice with some surgeons, but prefer spoon-feeding, as producing less disturbance. For the same reason, anodynes should be employed to control pain and keep the little one for a few days in a quiescent state. The child should be in the best possible condition physically, as quick union is desirable. To avoid the marginal depression so commonly seen, and which is inevitable if the simple inverted-V incision is used, I never sacrifice any portion of the paring, but, commencing the incision at the apex of

the cleft, it is stopped just before it reaches the border of the lip, thus leaving a base of supply to nourish the flap which remains on either side. These two flaps, when the parts are brought together, project downward and form a fleshy prominence, but, if stitched nicely together, will unite, and from subsequent absorption during the next year will give a slight projection. Even should this be larger than desirable, it is far preferable to the ugly notch which cannot be corrected, since a simple scissor-cut will remove all redundancy and give a nearly normal lip. The same rule in regard to utilization of tissue holds good in complicated cases of hare-lip when it becomes necessary to save as much of the alveolus as possible. Broken or cut, it can often be worked to advantage in bridging the chasm or supporting a fallen nasal septum.

If *cleft palate* coexists with hare-lip, an additional necessity for early treatment is present, since the closure of the lip will tend greatly to lessen the gap in the hard palate. Dentists realize more fully than surgeons how slight is the pressure required to act upon a tooth or upon the alveolar process; but a moment's reflection will convince any practical man that such narrowing can be accomplished, even if he has never witnessed it. In these instances, as in hare-lip and many other deformities, neglect is often as much the fault of the physician as of the family. An early operation upon the lip, strong pressure upon the maxillary bones, followed by the use of a Hainsby's compressor, will in a few years bring the cleft so closely together that a single operation will unite the edges.

These are the considerations which influence me in advising that, while the lip should be closed early, the cleft-palate operation be deferred until the plan has been tested. Few children from five to ten are tractable enough to endure the pain of a staphylorrhaphy without ether, which is desirable, and I see no particular harm in delaying the procedure until the latter period, save that the unused or malused muscles will require a longer period of education after closure. In a recent staphylorrhaphy upon a boy of sixteen, the letters of the alphabet could, however, all be correctly pronounced in three weeks, except the *k* and hard *c* sounds. If a good velum and uvula can be secured by union, the hard palate can be admirably assisted by an obturator. Only last week, by preliminary touching and the use of cocaine I was able, in a child of five years, to make the parings without pain, and thus avoided anæsthesia until hemorrhage had ceased; ether being employed for stitching only.

Tongue-tie is a condition that exists more frequently in imagination than in reality, yet the operation for its relief need be no more than the most trifling nick of the frænum, the finger completing the work. If the organ can be protruded to the red border of the lip, no operation is necessary.

Club-foot is a deformity which is frequently neglected, not alone from the apathy of parents, but, as is shown by the cases which come under my notice, far more frequently from the incomprehensible advice of the family physician, who has counselled that "nothing shall be done for the present." Weeks slip away into months, and months into years, during which time one set of muscular fibres and one set of ligaments have become elongated, while the opposite ones are atrophied, condensed, and shortened. Bones, too, have become distorted and wedge-shaped, and the difficulties have of course increased fourfold with each advancing year. I have never been able to comprehend any reason why delay should be countenanced a single day after birth, since manipulation and subsequent fixation can easily be accomplished at the first dressing of the child. I know of no words sufficiently strong to characterize such neglect of duty as is seen in numerous instances. Twice in the last three days have I had this matter brought before me by parents who have come to the office, and who have given as the reason of their inaction that the physician had directed them to wait. Even before the age for walking great condensation of tissue will take place, and increase of deformity will occur from simple pressure of clothing, but as soon as the weight of the body is brought to bear upon these misshapen members the change will be rapid. The secret of cure of club-foot lies not in operation, but in careful attention to all the means of relief. At the first hour of birth, as I have said, manipulation should be commenced by bringing the foot from the abnormal into a normal position, or as

near it as possible, and confining it there by wood, felt, binders' board, or leather splints, rightly adapted. At the next visit, leather, gutta-percha, or, preferably, printers' blanket cinctures, should be laced upon the foot and leg, and connected by an elastic strap. The two-ply printers' blanket, with its rubber face, does not slip even when applied with only moderate tightness, thus being superior to other materials. Hook-eyelets are easily inserted by any shoemaker, and the lacing need not impede circulation. Manipulation can be practised twenty times a day without taking off the apparatus, while removal at night gives opportunities for massage, frictions, etc. If co-operation of parents is wanting, plaster of Paris can be employed with excellent advantage for fixation, a gain being effected with each month's renewal of the dressing. Leather, felt, sheet-lead, and silicate of soda are of use, but do not permit removal for manipulation, and are therefore inferior to the bands already mentioned. Those bands, which permit of constant elastic traction day and night, are very inexpensive, if remnants are bought. Their use puts the successful early treatment of any case of talipes in the hands of the ordinary practitioner for the first few months of life. In cases which are of a severe type a subsequent operation is usually necessary, but the manipulation which has been practised up to the time for tenotomy stretches condensed tissues and increases nutrition, so that relapse after division of the tendons will not occur if the same measures be continued subsequently. Failure after tenotomy is nearly always due to the neglect of manipulation. The special form of apparatus is far less important than a strict attention to details. The chief advantage of the shoe which I employ lies in the fact that it permits manipulation and stretching without removal, owing to its flexible sole-shank of upper leather, which acts as perfectly as a ball-and-socket joint, the force being exerted by an elastic strap operating upon the foot through a catgut cord passing through the eye attached to the upright. The eye-bearing arm is ordinarily constructed with too little of an outward bend. If I can control the patient, I rarely operate until I have the tissues thoroughly stretched; but if the foot cannot be placed upon its plantar surface at eight or nine months,—that is, when the age of walking arrives,—tenotomy should be delayed no longer, since each step will increase the deformity. In operating, I divide every tissue that interferes with perfect straightening, whether it be tendinous or fascial. The tendon of the posterior tibial is an exceedingly difficult one to sever in a fat infant with poorly-developed heel. The puncture should be made just below the malleolus, and, having placed the back of the tenotome towards the artery, division can be safely made. Tenotomes, as found in the shops, have too long a cutting-surface for infantile work, as the sharp edge will frequently enlarge the external wound unnecessarily. It is my practice to leave the tendo Achillis until the end of the operation, in order to gain its fixation lower in the leverage required for stretching the parts into position,—a procedure which is best accomplished at the time of operation. The amount of power which should be employed in this process is governed by the degree of resistance and the caution of the surgeon, especial care being taken that the force be expended only on the resistant tissues. In the class of cases with which this paper deals,—namely, young infants,—it is scarcely possible that tarsectomy could be called for, although an English surgeon has thus operated upon a sixteen-months-old babe. I now use the gypsum-dressing entirely after tenotomy, since it is not only less expensive, but chiefly because it holds the foot and heel in much better position than is possible by other apparatus, and is less liable to produce sloughing, since the pressure is exerted over the entire surface. The instances where plaster produces a slough are always due to faulty application, mainly caused by some indentation produced during the setting process. If the bandages are smoothly and rapidly applied (salt having been added to the water in which they are immersed), the surgeon can, by grasping the knee, hold it steadily in place, while with the palm of his other hand placed against the plantar surface of the child's foot, complete rectification can be maintained until the plaster hardens, without danger of depressing any region of the cast. A dossil of curled hair or cotton placed over the ball of the great toe and the prominence of the cuboid or astragalus, and confined in position by the flannel bandage enveloping the foot, will also assist in averting any harmful pressure.

I cannot too strongly emphasize my appreciation of plaster of Paris in the treatment of *fractures* in infants, giving, as it does, a perfectly-adaptable material, and yet, when hardened, securing an immobility of the injured part that permits free handling, provided the articulation both above and below the injury be included in the dressing. This is feasible even in fractures near the hip, since the splint can be made to encircle the thorax, and thus prevent the great motion that is always present if only the pelvis be fixed. No risk of injurious swelling need be feared, if a flannel bandage or a thin layer of cotton is first applied to the limb. It is better to saw open a dressing at the end of two weeks, and either tighten it or apply a new one. Silicate and other rigid dressings harden so slowly that displacement may occur during the process. The fractures occurring during birth are often overlooked for several days, and the fact that the child moves a particular portion of its body freely is not proof that lesion of bone has not occurred. I have seen several instances of fractured clavicle in which the child indulged in most vigorous movements of the arm. These collar-bone breaks are quite common, either from falling out of bed or from careless handling, or from the playful jerking of other children. The under-waist of an older child placed in proper position over the well arm, and pinned tightly around the body so as to include the injured member, often keeps in place better in fat babies than a Velpeau bandage, especially if the hand is secured with a loop. Borated cotton should be placed in the axilla.

Green-stick fractures are best treated by etherizing the child and slowly straightening the bone by hand-pressure. Even should complete solution occur, the result will be good. A slight curve can be reduced by splint and bandage. Separation of epiphyses are practically fractures, and should be treated as such.

Dislocations do not differ from similar injuries in adults, save that they are even more readily replaced by manipulation.

The resultant deformities of *infantile paralysis* are numerous, and are frequently passed over by both physician and parents, under the erroneous impression that nothing can be done for the relief of these poor, weakened members. Recognizing that restoration is best accomplished by massage, electricity, etc., and particularly by action, it is my rule never to assist a muscle if it is capable of permitting locomotion, or unless deformity is being produced by non-support. The following are considerations that determine the necessity for apparatus. If a bone is bending, or an articular surface becoming distorted, or a ligament yielding, or muscles becoming atrophied from excessive stretching, or if by applying a support the child can be made to walk, then I always order an apparatus which shall not take the place of the enfeebled muscles or put them in splints, at rest, but which shall render just enough assistance to enable them by hard contraction to accomplish the desired purpose. If rigid steel is used, they will soon relinquish their attempts at assertion of power, and enfeeblement will increase. By a judicious adaptation of mechanical appliances, many who are now condemned to chairs and beds can be placed upon their feet. The advisability of tenotomy will depend upon the benefit to be gained by such a procedure. In many cases it will assist greatly in placing limbs in proper position for locomotion, and for this reason its mechanical effect should be thoroughly studied. My observation leads me to believe that it is employed too seldom. The excision and shortening of tendons by suturing is often of advantage. Any irregularity in the length of limbs should be counteracted, lest lateral curvature result.

Nævi, if situated upon exposed portions of the body, must be cured early in life if rapidly increasing in size, and in the majority of cases should be attended to before six months is reached. The question of excision, ligature, subcutaneous ligature, injection, electrolysis, or sun-heat, will depend upon situation, size, etc.

Webbed fingers and supernumerary toes and fingers will yield smaller resultant scars if operated on during the first half-year of life.

Wry-neck may follow injury to the spinal accessory nerve during labor, or it may be found as a result of some of the exanthemata. If resistant to local and constitutional remedies, myotomy should be performed at the end of a year.

Spinal caries in young children can be retarded by placing the sufferer upon its back between two sand-bags, while passive

motion is employed to develop muscular power. A jacket or cuirass may be added when bone-death is rapid or if difficulty of retention be experienced. Horizontal extension is rarely necessary. I have occasionally seen *lateral curvature* in weak infants caused by the mother's habit of always holding them in one position, the reversal of which custom has, together with constitutional remedies, completed a cure. It may also be the result of a rachitic tendency, which will necessitate the appropriate medicinal and hygienic management. Simple posterior curvature and also lordosis are sometimes found, and should be closely watched, as other symptoms of that disease of malnutrition, rickets, may soon present themselves. Dorsal decubitus should be maintained until the proper treatment has had time to strengthen the child. *Rickets*, fortunately, is seen upon this side of the Atlantic far less frequently than on the Eastern shores, and, I am thankful to say, is seldom found in Philadelphia even as compared with New York. In fifty thousand cases in our hospitals, I find that less than fifty are enumerated under rickets and its results, including knock-knee, bow-legs, etc. Its onset is usually within the first six months of life, but unfortunately many cases are not brought to the notice of the surgeon until one or two years have elapsed and great deformity has already resulted. When pronounced, the most rigid care should be taken to prevent the distortions from which no bone in the body seems exempt. The effects upon the female pelvis are most disastrous, and life is thereby endangered. The recumbent position is the only safe one, and must be maintained until the general remedies have time to act, passive motion meanwhile taking the place of active. The tibial curves are the most common defects. Very slight bowing is sometimes corrected in the growth of the individual, but we have no more right to expect that such a result will spontaneously occur than that a crooked tree shall be blown into the upright position by chance winds. The proper means should always be used to compel rectification. If the bones are spongy, then much can be expected from manipulation, pressure, and apparatus properly constructed. During the first two years of life we may confidently hope to accomplish a good result by such means, but in later childhood or adult life, if the deflections are great, the bones rigid, and especially if the curve be anterior, but little can be gained by these means, and osteotomy is the more certain and speedy means of relief. The risks of this operation, if done antiseptically, are but very slight, as the case, if sealed, becomes one of simple fracture. Plaster of Paris again gives us the best fixation after operation, and is very comfortable to the patient.

I approve of instruments in lateral bow-legs, but when they fail to secure straight limbs in the class of cases above mentioned, I firmly advocate operation. To permit the deformity to continue is not only unsightly, but also interferes greatly with the locomotive powers. It is not true that a bow-legged man is strong. He has, on the contrary, to use his limbs at a disadvantage, and if he be vigorous it is in spite of his complaint.

The question of *tracheotomy* in *young infants*, with whom our present discussion chiefly deals, is one demanding the gravest consideration, whether the dyspnœa originates from diphtheria or from true croup. So fatal are the results, that the mortality in babes below the age of six months is placed by some writers as high as ninety-five per cent.; and, even taking all cases under two years, we cannot expect to save more than from ten to fifteen per cent. When we consider, however, that some English writers place the mortality of croup without operation at ninety per cent., we at least cannot believe that the operation has increased the number of deaths. Moreover, when cases are taken at the most favorable age and under the most favorable conditions, we can scarcely hope to save more than twenty-five per cent. of all cases operated on. I have spoken thus in regard to prognosis, since some surgeons absolutely condemn the employment of tracheotomy for these young cases. I cannot feel, however, that they are absolutely hopeless, and if surgery can relieve them from the horrid death by suffocation we should not hesitate to give them the aid of science, although a true tracheotomy is wellnigh impossible in a young, fat infant, owing to the exceeding shortness of the trachea and the great size of the thyroid body. It is usually best to do an inferior laryngotomy (or crico-thyro-laryngotomy), making the opening through the crico-thyroid membrane, and also through the

cricoid if necessary. The risk of hemorrhage is thereby greatly diminished, since while the crico-thyroid arteries may be cut, they will be far less troublesome to secure than will the vessels about the thyroid body or the middle thyroid artery, which often lies in front of the trachea. Again, the innominate artery may rise high in the neck, or a wound of a vein near the innominate may speedily kill the little one, as has happened in a number of instances even when the operator has been experienced. The fact that surgeons who have opened the windpipe several hundred times look upon this operation as an exceedingly difficult one, is proof that the utmost care is necessary. The danger of wandering from the median line may be partially obviated by having the child's head kept perfectly straight and by placing the body in an exact line with the table. The trachea is sometimes missed because it has not been thoroughly cleared of everything before attempting to open it. The puncture should be made firmly but guardedly. The size of an infant's trachea will surprise one who has never studied it. Although I had given large and special study to the anatomy of childhood, both from the cadaver and clinically, my first tracheotomy case died on the table before I could insert the tube, my error being in trying to push the canula too far back. Unless the urgency is great, ether should be given in moderate amount and the operation carefully performed. A plunge into the trachea is never good surgery; in infants it would be worse than folly. If a circular piece is taken from the crico-thyroid membrane and cricoid, and a pilot used, introduction will be rendered more easy. In fat necks, the windpipe may be brought nearer the surface by extending the head far backward and by grasping the tube on either side and dragging it forward. If fixed thus in the median line, and retained continuously by an assistant, much time will be gained. In a recent case I found it wiser to go above a large thyroid body, even in a five-years-old child, and insert the canula in the crico-thyroid space. There was afterwards a slight burying of the upper edge of the plate, owing to its high position, but a strip of sheet-lead obviated this difficulty. To arrest the venous hemorrhage, just before puncture, hot-water sponges answer admirably. After operation the temperature of the room should be kept above 80°. I have never opened the larynx to remove a foreign body in a very young child, but the universal habit of making the mouth the general receptacle of everything makes the introduction of such substances exceedingly probable at from one to two years.

Foreign bodies in the nose which cannot be seized, and which are not removed by sternutatories, should be always sought for with the aid of anæsthetics.

In the ear the opposite mode holds good, since consciousness of pain will often prevent an unskilled practitioner from doing great injury to the membrana tympani.

Joint-diseases are best treated recumbently, with fixation or extension.

Excisions are rarely performed at this early age, and need not, therefore, be discussed.

I omit strumous and syphilitic diseases, and a score of other conditions which might well detain us for hours, since time forbids.

I have thus, gentlemen, hastily touched upon only the more frequent of the surgical maladies met with in daily practice among infants. Many of the suggestions may be already familiar to you, but even the brief mention which I have been allowed to bestow upon each subject may possibly have served to revive in your minds old and forgotten experiences, and thus be helpful. You will at least see that the field is a wide one, and that results are most encouraging.

1818 Chestnut Street.

ORIGINAL COMMUNICATIONS.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,
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THE PROPHYLAXIS OF BLENNORRHŒA OF THE NEW-BORN CHILD.

UFFELMANN gives the following facts in connection with the subject. Statistics from a number of European hospitals and foundling-institutions show that an average of about thirteen per cent. of the newly-born children are attacked with blennorrhœa when no prophylactic treatment is employed. In connection with this, it is interesting to know that of two hundred children born in the grand-

duchy of Mecklenburg-Schwerin in private homes during the year 1882, only one was attacked with blennorrhœa. This is only one-half per cent., and of course points to the comparatively greater frequency of the disease in hospitals, etc. Another interesting point in this connection is in respect to the percentage of persons blinded by blennorrhœa. Horner's statistics showed that about 33 per cent. of the blind in the various institutions of Germany and Austria had lost their sight through this disease; Doumas's statistics showed that, out of 1078 cases, 69 per cent. were due to blennorrhœa; while Magnus, in compiling his statistics, found at first 34 per cent., but, on considering a much larger number of cases, 13.25 per cent. These statistics of course have to do with the hopelessly blind, and not with cases which have lost one eye or have been partially blinded by this disease.

The prophylactic treatment of Crédé is as follows. Immediately after tying the cord, the child is placed in a bath, and while in it the eyelids are carefully washed with fresh water (not the bath-water), an absolutely clean piece of linen being used. The child is taken out of the bath, and before dressing it each eye is opened and a two-per-cent. solution of nitrate of silver dropped in. This is not repeated. The effect of this has been practically to abolish the disease in the institutions where it has been tried. Crédé declares that the treatment has no ill effects; only in a few cases of premature birth was the conjunctiva irritated by it. Others have seen this also in children who have gone to full term.—*Centralblatt für Prakt. Augenheilk.*, April, 1885.

NEURO-RETINITIS, WITH RAPID LOSS OF SIGHT.

Knapp reports the following cases:

Case I.—A gentleman, æt. 40,—strong, healthy, temperate, without constitutional disorder,—was seized with intense headache and nausea. On the evening of the same day the sight became dim. He slept well during the night, but the next morning was totally blind. On the afternoon of the same day Knapp found him free from pain and fever, sensorium undisturbed, appetite good, general condition excellent. He had passed no water during the whole day. The bladder seemed empty on percussion. Fifteen grammes of urine were drawn off by the catheter. The external appearances of the eyes were normal. Pupils widely dilated and irresponsive to incident light. No perception of light existed. Mobility and tension normal, media clear. Anterior chambers of ordinary depth. Well-marked appearance of choked disk in each eye, the retinal veins rather large and tortuous, the arteries small, not pulsating on pressure on the globe. No hemorrhages, no white patches in the fundus. The tests for albumen and sugar were negative. Salicylate of soda was ordered until profuse diaphoresis was induced. The next day the urine had still to be withdrawn by catheter: the amount secured was about thirty grammes, free from casts, albumen, and sugar. No change as regards sight. Diaphoresis repeated, with dry cups to the temples. The day following, the patient passed more urine. The condition of the eyes was unchanged, except that the retinal arteries were rather more filled. Dr. Draper, who was called in consultation, could detect no abnormality in the heart or other organs of the body. On the fifth day of the attack the patient was a little somnolent, but passed more urine. The changes which occurred for the next fifty days were mainly the following. The retinal arteries, which had not pulsated on pressure on the ball at first, did so readily; the optic disk became pale and flat, as if atrophic; the retinal veins became of normal size; pupils continued widely dilated; the blindness was absolute. There was some tingling and numbness in the left hand and leg. Ten months after the onset there was noted slight return of sight in the R. E. Otherwise there was no apparent mental or bodily failure. The treatment consisted of strychnia, electricity, generous diet, large doses of potassium iodide, mercurials to repeated salivation, and blisters behind the ears.

Case II.—Caroline L., æt. 11½ years, in good general health, never suffered from severe disease. For five or six days had suffered with temporary obscuration of sight. Two days before she was seen by Knapp, at times in the forenoon it seemed as dark as night to her; at 3 P.M. the L. E. had become blind. The sight of the R. E. gradually failed, and by noon of the next day had entirely vanished. Examination on the following day revealed the following: Both pupils of medium size, immovable; sight = 0 in each; me-

dia clear; both disks swollen; arteries small; veins large, dark, easily emptied by external pressure, which caused the disk-portions of the central artery to pulsate; outward appearance, tension, mobility, sensibility of the eye normal; urine normal in quantity, specific gravity, and chemical composition; no morbid symptom of the brain or any other organ. She was placed on salicylate of soda and calomel. Profuse perspiration and excessive diarrhœa were induced. The diaphoresis was repeated. Calomel discontinued for several days, then repeated so as to induce one or more stools a day. Under this treatment the sight returned completely in about a month, and when last seen, two months later, was perfectly retained. At this time, apart from the atrophic appearance of the disk, nothing abnormal could be detected in either eye.—*Rep. Amer. Ophth. Soc.*, 1884.

[These two cases seem to be essentially different. The striking point of difference is in the quantity of urine secreted. In the first case it was abnormally small, in the second normal. This indicates perhaps in the first case simply an abnormal state of the general arterial tension which so disturbed the retinal circulation as to induce the ophthalmoscopic changes, etc. In other words, the so-called neuro-retinitis of this case was simply a form of suddenly-induced disturbance of the retinal circulation accompanied by profuse escape of lymph. In the second case there possibly was a somewhat similar condition of the retinal circulation, but more local in its origin. The practical bearing on the treatment of the cases may be thus stated. The successful result in the second case was due largely, if not altogether, to the purgative action of the calomel. The abdominal vessels were acted on, the arterial tension in the carotids and their branches altered, and the circulatory disturbance in the retina restored.

The condition in the first case seems to have been different. From the well-established relation between the arterial tension in the aorta and the flow of urine, it may be surmised that the tension in the abdominal aorta at least was lowered, and that the circulatory disturbance in the retina was attributable to it. The cause of the lowered tension was of course obscure, as was also the proper method of treatment. The method of action on the skin was fairly tried and failed. The reviewer's experience is that this method is rather adapted to inflammatory condition of the uveal tract than the morbid condition at present under discussion. It must be confessed that the treatment of a case of this kind presents great difficulty, but the above *rationale* gives at least a clue: medication with a view to increasing the flow of urine might be tried, and digitalis given tentatively while the condition of the retinal vessels is carefully watched suggests itself as the one to be tried first.—H.]

ATROPHY OF THE OPTIC NERVE IN MYXŒDEMA.

Dr. O. F. Wadsworth reports the following case. The symptoms of myxœdema had first appeared five and one-half years before the eyesight began to fail; the latter had gradually progressed for one and a half years. At this time the face was full, heavy, of waxen hue, the natural folds obliterated; the hands and feet enlarged; the skin not dry to touch; thyroid of normal size; heart, lungs, temperature, pulse, normal; urine normal in every respect; conjunctiva, cornea, iris in each eye, normal; movements of eyeballs good; R. E. V., only light-perception; L. E. V., $\frac{20}{40}$; field contracted in all directions; media clear. In both eyes the disks were sharply defined, bluish-gray; central vessels, both arteries and veins, small.—*Rep. Amer. Ophth. Soc.*, 1884.

IRITIS SEROSA OF SYPHILITIC ORIGIN.

Dr. Alexander, of Nachen, reports the following case. This patient was infected with syphilis in 1882. Upon the first indications of general infection,—roseola, sore throat, loss of hair,—the patient was placed upon mercury and potassium iodide for a long time. He was apparently freed from the disease, but in one and a half years from the time of infection he was attacked with a recurring inflammation of both eyes. Six months after the commencement of the eye-disease, the following was noted. R. E. Tension normal, conjunctiva not injected, aqueous humor cloudy; punctate deposit on the Descemet; pupil not adherent, and easily dilated with atropia. L. E. Only a few punctate deposits on the Descemet. There was then a serous iritis in one eye, and evidence of its previous existence in the other. Under treatment the symptoms subsided, then

recurred. Sometimes the right, then the left eye would be affected. The patient was subjected to inunction, during which an eruption of varicella syphilitica appeared, subsided in eight days, and returned again. The author refers to the coexistence of serous iritis and syphilitic diathesis as being very rare, having, in an experience with many thousand syphilitic cases, never observed this form of eye-disease before.—*Centralblatt für Augenheilk.*, April, 1885.

ABSCESS OF EYEBALL AFTER MENINGITIS.

Dr. Meeks reports the following case. A child, æt. 13, was attacked with scarlatina and confined to bed for three weeks. Subsequently otorrhœa manifested itself. After this, six weeks from the commencement of the scarlatina, symptoms of violent meningitis occurred, with marked typhoid symptoms. Three weeks later the R. E. became inflamed and the sight was lost. Thirteen weeks from the inception of the scarlatina, the condition of the eye was this: shrunken eyeball, clear cornea, iris bound down by adhesions, lens tolerably clear, vitreous infiltrated. An abscess existed between conjunctiva and sclera below. The eyeball was enucleated. The contents of the abscess were of cheesy consistence, and the cavity of the abscess communicated, by an opening three millimetres in diameter near the equator of the ball, with a space between the retina and choroid. The retina was separated totally from the choroid, the space between the two being mainly filled with a sero-purulent fluid. The optic nerve was in a state of atrophy.—*Centralblatt für Augenheilk.*, May, 1885. [The clinical history points to septic infection from the purulent ear-disease. The blood-vessels of the choroid do not seem to have been examined for micro-organisms. Probably, from what is known of septic eye-infection, arteries in the choroid existed occluded by septic material, hence the serous transudation between retina and choroid, the iridocyclitis, and the abscess.—H.]

CONTRIBUTION TO THE PATHOLOGICAL ANATOMY OF GLAUCOMA.

Binnbacher and Czermak report the following results of a series of microscopic examinations made upon eyeballs in which primary glaucoma of the chronic inflammatory form had existed. In all cases the uveal and scleral tract showed marked changes, the result of existing or pre-existing inflammation. The most important fact noted was that the inflammation had extended along the veins, especially the vortex branches. In the vessel-wall and in the perivascular space, in some cases, a young granulation-tissue was noted; in others, a firm cicatricial tissue. Moreover, the endothelium of the vein was observed to have proliferated, forming masses partially obliterating the lumen. Marks of inflammation were also observed about the veins of Schlemm's canal and the anterior ciliary veins. The authors consider this condition to be a periphlebitis chronica hyperplastica, with concentric endophlebitis. They do not attempt to base a general glaucoma theory upon this pathological condition, but suggest that at least in certain cases the above-named periphlebitis arises. Circulatory disturbance within the eye arises, giving rise to the peculiar group of symptoms known as glaucoma. The term glaucoma is essentially clinical, and is the expression of a circulatory disturbance called forth by certain anatomical changes which cannot be compensated for by the organism.—*Graefe's Archiv*, 1 Abth., 1885.

A NEW INSTRUMENT FOR THE TREATMENT OF STRICTURE OF THE DUCT.

Prof. Tantuferi uses an instrument shaped like a Daviel spoon, with an olive-shaped probe-point. The spoon portion of the instrument is made to act like a file, so as to remove hardened tissue. Where cocaine is first injected into the canal the operation is painless. The results of treatment are said to be satisfactory.—*Centralblatt f. Augenheilk.*, May, 1885.

THE FIELITZ READING-MACHINE.

This is an apparatus intended for children who are learning to spell. It consists of a frame on which letters can be placed and arranged in any desired combination. The object is to prevent or break up the injurious habit of bending over the letters when a primer is used, while at the same time it allows of class-instruction, and thus overcomes difficulties which exist where, especially in large classes, each child has its own book.—*Klinische Monatsblätter*, May, 1885.

A NEW PERIMETER.

Dr. Dyer describes a new instrument for taking the field of vision. It is a combination of the bow-perimeter of Förster and the hemisphere of Scherk. The

hemisphere is made of a spiral of strong brass wire, starting at the fixation-point and running spirally around this centre until a hemisphere is formed. By a suitable attachment, the eccentric object is moved on the spiral from centre to circumference. A field can be taken in about two minutes. When desirable, a small electric lamp can be attached to the carrier, and thus the field tested for its light-perception.—*Rep. Amer. Ophth. Society*, 1884.

NOTES OF HOSPITAL PRACTICE.

PHILADELPHIA HOSPITAL.

CLINIC OF J. M. KEATING, M.D.,

Visiting Obstetrician, Philadelphia Hospital, and Lecturer on Diseases of Women and Children, etc.

REMARKS ON THE TREATMENT OF WHOOPING-COUGH.

I HAVE recently been able to study, with more than ordinary care, four very marked cases of whooping-cough, and the results of treatment have been so interesting to me that I think the matter of sufficient importance to make it the subject of my remarks this morning. I may premise, whilst on this subject, by saying that I have been frequently asked what is the length of the period of incubation of this disease. This is a difficult matter to determine. Nevertheless, I think we can place it at from twelve to sixteen days; usually, two weeks. In the cases above mentioned, three children were exposed once: a playmate, with the disease then unrecognized and supposed to be a bad bronchitis, spent the afternoon with them, playing in a warm nursery.

The period of incubation in these cases was two weeks, and it could be calculated to a certainty, as they were exposed only once.

The children had had the disease about three weeks when I saw them. Their ages ranged from 6½ to 2. They had from eight to ten very marked paroxysms daily. The nights were disturbed by frequent coughing, and there was the usual distressing vomiting after each meal.

The plan of treatment adopted was the following, and at the end of a week the cough had almost ceased in the eldest and youngest. The second child, aged 4 years, had had one or two slight paroxysms at night, but these soon ceased also. The remarkable improvement could only be explained as the result of treatment; and especially was this noticeable from the fact that after they had been free from the cough entirely for fully three weeks the spray was omitted (the rest of the treatment having been stopped at least ten days before), they were sent to the sea-shore, and at once the paroxysms returned in all three cases with considerable severity. I think this point interesting, as it shows that the treatment merely held the disease in abeyance, as it were, and did not cure it, and that change of air either produced a catarrh which aggravated the whooping-cough or irritated the mucous membrane. To my mind, this is an evidence that we have in this disease a cause which acts on the central nervous system directly, and requiring a peripheral irritation either in the pharynx or larynx to produce the paroxysms. Certainly, if the disease-germs resided alone in the pharyngeal or laryngeal mucous membrane, a line of treatment that would so effectually act as to destroy them for a period of three weeks would be followed by more marked evidences of permanent improvement. A change of air and cessation of local applications might be followed by a gradual relapse, but in these cases the paroxysms returned with an intensity that could only be accounted for by the fact that the central nervous system was at all times affected by a poison which, from the fact that there was a noted period of incubation, was carried to it in the circulation, and that the local treatment diminished the tendency to local irritation in the throat.

In these cases I used, four or six times daily, the spray of the following:

℞ Ammon. bromid.,
Potass. bromid., āā ʒj;
Tinct. belladonnæ, fʒj;
Glycerinæ, fʒj;
Aquæ rosæ, q. s. ad fʒiv. M.
Ft. sol.

A tablespoonful of this was taken with the same amount of "Listerine" and used with Snowden's atomizer, No. 2. It is by no means an easy matter to use the spray successfully with children, and as, in my opinion, the success or failure of the treatment depends so largely on this, the *modus operandi* should be thoroughly understood.

I do not use a tongue-depressor, as I find that its presence will cause gagging in most cases. The child should open the

mouth wide, as wide as possible, and then be told to breathe as deeply and rapidly as it can. This rapid breathing will not only carry the vapor into the larynx, but will also divert the child's mind and prevent that reflex spasm of the arches of the pharynx which is so likely to occur. The spray should be continued, if possible, for a minute, then the child should have a rest, and again attack it, and so on for at least six or eight applications. The spray should be used before meals and just before going to bed. As regards the solution, although the above has answered most satisfactorily in my hands, I would vary it according to circumstances.

If the secretion be very scanty and tenacious, it would be necessary to use possibly the ammonium chloride instead of the bromides, with from four to six grains of acid. carbol. (cryst.) to the f℥iv. If the secretion be too profuse, the belladonna could be increased or alum added to the solution. I consider "Listerine" an excellent solution, and I add glycerin owing to its water-absorbing properties and to its adhesiveness. To use the spray with good results it must be thoroughly and frequently used, and also kept up for some days, even weeks, after the paroxysms have diminished or ceased.

In the cases above mentioned I also gave the following to bring about a good night's rest:

℞ Potass. bromid., ℥j;
Chloral hydrat., gr. xxiv;
Cibil's ext. carnis, f℥iij. M.

(Any reliable fluid meat extract can be used.)

Dessertspoonful in water at bedtime.

I find that children will relish a cup of beef-tea at night in this way. It is strengthening for them, and disguises admirably the salty pungency of the medicine which it conceals. They also took

℞ Quiniæ sulph., gr. j;
Syr. yerbæ santæ, ℥j. M.

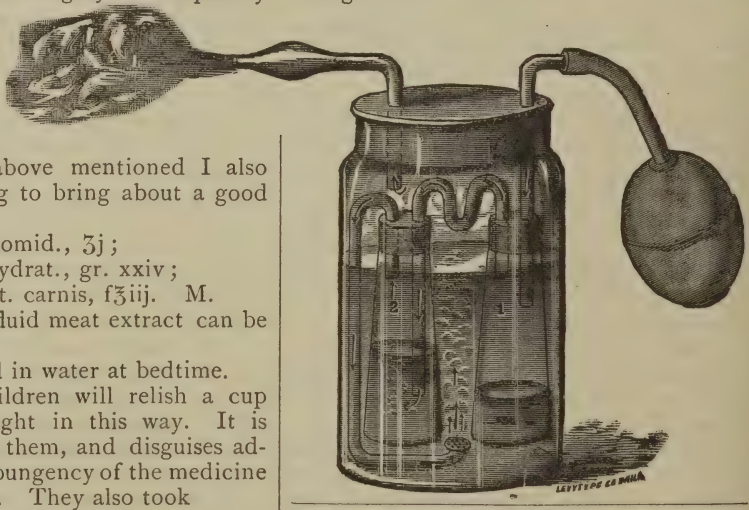
Three times daily.

The syrup of yerba santa, used to disguise quinine, should be made *without the resin*. When made in that way I find it an excellent vehicle.

The greatest difficulty is in the treatment of infants under one year with this disease. The use of the atomizer is of course very difficult, and it becomes necessary to substitute something for it.* Belladonna I find stands at the head of the list. I give it in two-drop doses of the tincture three times daily for a child a year old, explaining to the mother exactly what is expected of it. If the night paroxysms are very severe, three drops can be given at night with the mixture of potass. bromid., gr. ij; chloral, gr. ij; or a teaspoonful of lac asafœtida.

The symptoms of belladonna-poisoning are, as I have had occasion to note, dilated pupil, intense scarlatinous rash, and slowing of the respirations; indeed, the latter may be very alarming. On this account I prefer to give the belladonna separately from any mixture, so that its dose may be regulated. In some cases it can be pushed until the pupils begin to dilate, in others the dose tolerated will be small. I prefer the tincture of belladonna to atropia, as I believe it a safer preparation to put into the mother's hands.

The following mixture I have found excellent in some cases where the paroxysms are very violent and frequent, especially at night:



* The accompanying cut represents an arrangement which Mr. Genois, of John Wyeth & Brother, has kindly had made for me, by means of which the vapor of bromide of ammonium can be readily generated. The bromine in stated quantity is placed in water in one of the small vials, aqua ammoniæ diluted to a certain degree in the other. These are connected by glass tubes, and both are immersed in a larger vial containing water which is slightly carbolized or made aromatic. The vapor of bromide of ammonium, generated in vial No. 2, is passed through this washing solution. Thymol could be added to this washing solution, I believe, with advantage. I think that the vapor of ammonium bromide, when medicated as above, will be of more universal use than the spray, and will not only be valuable for all forms of cough, but also useful as a direct application to the throat in various affections.

℞ Tinct. belladonnæ, gtt. viij;
Vini ipecac., ♏xx;
Spts. ætheris nitrosi, ♏xx;
Aquæ, q. s. ad ℥j. M.

A teaspoonful in an equal amount of water, with a little sugar, and repeated in one hour if required.

If the paroxysms are severe during the day, the secretion tenacious, and expectoration difficult, the following will often do well, with a dose of chloral at night:

℞ Ammon. carb., gr. viij;
Syr. scillæ comp., ♏xx.

Neutralize, and add

Syr. tolutan., f℥ss.
Aq. aurant. flor., q. s. ad f℥j. M.

Dessertspoonful three or four times daily.

As the child constantly craves water, and if allowed to wait to satisfy its thirst for the time of nursing its eagerness will bring on a paroxysm, it is well to give it frequently a drink of sugared water with a pinch of bicarbonate of sodium.

I have had an excellent opportunity of testing the value of vaccination in whooping-cough. It failed utterly; in fact, only added its own annoyances to those of the disease.

TRANSLATIONS.

Enteritis from Absorption of Corrosive Sublimate used in Dressing Wounds.—To the four deaths from mercurial intoxication reported by Drs. Stadfelt, Bokelmann, Stenger, and Maurer, Dr. Frankel (*Virchow's Archiv*, Bd. xcix. p. 276) adds fourteen cases of mercurial poisoning which occurred in the surgical department of the Hamburger Allgemeinen Krankenhaus, in which an extensive diphtheritic-like inflammation was prevailing at the time.

These are the first cases of this kind reported in the domain of surgery, the hitherto-published observations having all occurred in gynæcological practice.

These fourteen cases occurred within two and a half years, seven times in phlegmon with pseudo-erysipelas and ulcers of leg; twice in caries of the vertebra with burrowing abscesses; once in amputation of the thigh for senile gangrene; once in removal of a carcinomatous breast; once in myotomy; once in a laparotomy with removal of the uterus and right ovary for fibroid tumor; and once in an operation for the removal of a suprahepatic echinococcus cyst. All the patients were anæmic, run-down individuals, some of whom had fatty hearts. In all cases a large surface of the body or the interior of large wounds were in contact with the sublimate solution.

The most prominent symptom was diarrhœa, the stools being frequently mixed with mucus and blood. Salivation and stomatitis were not observed. It caused death in two cases (the breast-amputation and in a case of multiple gangrene of the skin of body and lower extremities). In the other cases the mercurial poison was complicated with dangerous symptoms from other causes.

The anatomical lesion of the enteritis was manifested by a necrosis of the mucous membrane from inflammation extending along the bowel. It was usually limited to the large bowel: the small intestine was only occasionally affected, and never unless there was also decided disease of the large intestine. In the worst cases the appearance of the gut resembled that found in a bad case of ordinary dysentery; the surrounding mucous membrane was infiltrated and reddened, sometimes swollen even to rigidity, and covered with extravasations. Changes in the other organs were not found.

Dr. Frankel concludes, from the clinical picture and from the absence of other post-mortem changes, that these appearances were due to mercurial poisoning, and not to diphtheria or beginning sepsis. He, in conclusion, cautions the profession against the use of mercurial dressings in run-down individuals, and also in very fat people, and especially those with fatty heart. He advises the use of this valuable antiseptic only in the weakest solutions, and cautions against too freely inundating the wound.

Herpes Zoster treated by Salicylate of Sodium.—Dr. Dubousquet-Laborderie communicated to the Clinical Society recently the results of the treatment of zona by sodium salicylate with marked and speedy relief to the neuralgia. One case was a boy, 15 years old, who had been treated for acute rheumatism two months before. Acting upon this suggestion, he was given twenty grains of the sodium salicylate every four hours, and in twenty-four hours he was entirely free from pain, which did not return, although the herpes pursued its usual course. Two other cases (of adults) were treated in the same way, with prompt relief from the neuralgia.—*La France Médicale*, No. 74.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 25, 1885.

EDITORIAL.

EXIT PERONOSPORA FERRANI.

FROM the figures given in the letter of our Paris correspondent, which probably include only a comparatively small part of the whole number, it will be seen to what an extent the rage for the so-called protective inoculation has been carried in the cholera-infected districts in Spain, and what a thriving and profitable business has been carried on by Dr. Ferran. The French commission, which went out to investigate this alleged discovery of the prevention of cholera by inoculation, have returned with the intelligence that Dr. Ferran is performing his inoculations in order to make money, and intends to keep his method a secret until he is "properly compensated" for his discovery. Inasmuch as, by his own showing, a considerable portion of those "protected" by his process afterwards are attacked by the cholera, and, in spite of the protection, not a few die with the disease, it does seem that Dr. Ferran and his discovery do not deserve much consideration.

Moreover, the injections themselves seem not to be so harmless as they have been represented, since a number of persons, including a physician, have died from blood-poisoning, or have recovered only after an amount of suffering to which an attack of cholera itself would be preferable.

While Dr. Ferran is engaged in the laudable purpose of acquiring wealth for his children, though by unprofessional methods, we can extend our sympathy to those physicians who recently tendered the honor of a public dinner to the great discoverer of the Peronospora.

THE PROPHYLACTIC TREATMENT OF BLENNORRHŒA NEONATORUM.

THE virulent conjunctivitis not infrequently seen in new-born children is a disease which has of late years excited considerable attention. Particularly is this the case in connection with the prophylactic treatment first brought prominently before the profession by Crédé, and since then extensively employed in various foundling-asylums and lying-in hospitals in Europe. We direct attention to some interesting statistics relating to this subject in the "Report on Ophthalmology" (p. 795), which shows the remarkable success attending the treatment. The treatment is, of course, especially applicable in institutions where new-born children are congregated, but doubtless is indicated in private practice where granular vaginitis exists at time of birth, or where the father of the child has urethritis. Another point in connection with this subject is the extreme importance of immediately and properly treating this disease when discovered. There can hardly be a doubt that many cases of blindness from this disease are the result of sheer neglect; and hence the pertinence and wisdom of the suggestion of one of the English ophthalmological societies, recently addressed to the Registrar-General, that "the following notice be printed on all official documents issued to parents in relation to birth, registration, and vaccination of children: 'If the eyelids become red and swollen, or begin to run with matter, within a few days after birth, the child is to be taken, without a day's delay, to a doctor. The disease is very dangerous, and, if not at once treated, may destroy the sight of both eyes.'"

ALUMNI ASSOCIATION PRIZE.

AT the next annual commencement of the College of Physicians and Surgeons of New York, to be held in May,

1886, a prize of five hundred dollars will be awarded by the Alumni Association for the best essay embodying the result of original research upon some medical subject. The competing essays, bearing a motto or device and accompanied by a sealed envelope bearing the same motto, containing the author's name and address, are required to be handed to the Committee before April 1, 1886.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

TREATMENT of Diphtheria.—We give an interesting *résumé* of the treatment adopted by Dr. J. Simon at the *Hôpital des Enfants Malades*. First, as to local treatment. Dr. Simon says, "For local applications I prefer simple lemon-juice or vinegar, or even pure red claret wine. I do not see much objection to perchloride of iron, but I think that the lemon-juice is best of all. I apply it as follows. Take a clean piece of wood, and attach to it firmly a small portion of lint, saturate it with the lemon-juice, and try to detach the false membranes without pressing hard enough to make the part bleed; at the same time do not simply touch the part, but exercise only enough pressure to attempt the removal of the membrane. This should be repeated every hour during the day, and every two hours during the night. If the patient be old enough, you may order a gargle every two hours of any one of the following liquids: boric acid four-per-cent. or borax two-per-cent. solutions, or chlorate of potash four-per-cent. solution, or even vinegar. In the younger patients we should employ irrigations. For this use anything for a reservoir that will contain at least two quarts of the solution, and that you can hang high up on the wall near the bed; from this suspend the tube, and give irrigations every hour. If the little patients will not open the mouth, place the tube inside the lips on the side of the jaw, and you will be astonished to see how quickly they will open the teeth and allow the irrigation to go on when it is started. They will afterwards ask for it, so much relief do they feel from its effects.

"On the neck you may apply any fatty substance you like, in which incorporate the iodide of potassium as a resolutive. I have been in the habit of ordering a sort of cravat of wadded cotton on which is spread an ointment of belladonna and hyoscyamus. I do not approve of ice applied around the neck, fearing some pulmonary complication. For internal treatment, give the perchloride of iron in doses of three to six drops in a little water, to be given at the moment you give some liquid aliment. Remember that this medicine will decompose when it comes in contact with metallic spoons, or milk, gum-water, etc. If the patient be over six years old, I give the following three to four times daily:

℞ Cubebæ, 30 centigrammes;
Copaibæ, 60 centigrammes;
Ferri subcarbonatis, 4 centigrammes;
Bismuthi subnitratis, q. s. M.

"As to the chlorate of potassium, I have not been able to see any great benefit from its use. Add to this all your efforts to sustain the patient: give alcohol in any of its forms, brandy, champagne, port wine, etc.; keep the temperature of the room at about 15° or 16° C.; have the air kept fresh by opening a window in the next room. A spray of thymol or carbolic acid may be kept going, or, what is better, keep a dish boiling with such substances in it near the bed. M. Delthil has proposed to keep the patient in an atmosphere of turpentine and tar; but this is still on trial.

In regard to the proper moment for operating, Dr. Simon said, "In a general way tracheotomy is indicated at the end of the second period, that is, not until attacks of suffocation may occur, but you must judge of the proper moment by the state of the respiration *tirage*, or draught. You must judge of the degree of obstruction there is, and operate promptly if asphyxia be menaced.

"Through interference of parents, or some other cause, you may not be allowed to operate until the child is really *in extremis*. Even so, try it, as cures have resulted. The proportion of success is, in all cases, one in five with us. From four to seven years of age you have the best chance. Below two the hope of success is but slight." After speaking of Dr. St.-Germain's rapid method of opening the tube with one stroke, Dr. Simon said it was only to be done by brilliant operators; and he then gave the method employed at present in this hospital, which he calls "the left-index method." Place yourself on the right of the patient, seize the larynx between the thumb and index of the left hand just as though you would enucleate it; with the index search for the inferior portion of the cricoid cartilage, from there make an incision about two centimetres long in the median line, taking in all the soft parts before the face of the trachea; put your index finger now into the wound, and give a second cut to clear all down to the trachea; then cut it exactly in the median line as long as the cut on the outside, and slip your finger now into it, stopping all blood from entering; then with the right hand take the canula and slip it over the nail of the index finger into the wound, and let it slide into its place; push it at first as though you were going back to the spine, then turn, and it will take in the front lip of the wound

and slip down over your nail; hold it for a moment while an aid ties the strings around the neck, and then clean the blood rapidly and place a gauze cloth over the mouth of the canula.

Report of the Commission on Cholera in Spain and Dr. Ferran's Method of Anti-Choleraic Vaccination. — This Commission, which consisted of Professor Brouardel, Dr. Charrin, and M. Albaran, has returned in haste to Paris from Spain, and Dr. Brouardel has submitted a long report to the Academy of Medicine. In brief, the French Commission are of an opinion that Ferran's method is, to say the least of it, very uncertain in its effects, and, owing to the fact that Dr. Ferran obstinately refuses to initiate foreign medical authorities into his method of attenuation, Dr. Brouardel regards him as an empiric, and he absolutely contests the validity of his discovery. Dr. Ferran gave the following answer to the Commission:

1st. That he refused to make known to them his process of attenuation of the virus of the cholera.

2d. That he would allow them to examine his liquid in his *own* laboratory, but that he would not allow a drop of it to be taken away.

3d. He proposed to the Commission that they would make a culture of the bacilli from the cholera-dejections and hand it to him, when he would attenuate it and return it to them.

The Commission refused, and returned to France.

It is only fair to give Dr. Ferran's reasons. He writes a long letter to justify his views. He says, "I commence by declaring that in regard to the prophylaxis of cholera there are two points of view that are quite different. The first one is the effects produced by the vaccination. This is the one that really interests humanity; and the second one is the manner in which I make the attenuated liquid. This last is quite apart from the first. What interests all the world is, Do the inoculations practised with my method really prevent cholera? and I claim that they do. That the second part interests all the world I do not believe, and I have particular reasons for not giving up, at present, my secret. After having worked a long time at these studies I submitted my results to my government, but I was received with a silence and an opposition that was trying. I received no help except from a few friends. I sacrificed all I had,—my health, my practice, and what little resources I had,—to find not the slightest assistance, even after I had proved the great importance of my discovery. I do not refuse to show my process to all the world if the government will recompense me in some slight way for all my trouble, as the German government did Dr. Koch. All the glory in the world cannot recompense me for the pain I should feel if I should leave my children in poverty."

As the above will show, Dr. Ferran feels that some recompense ought to be given to him before he will show his method. It is not worth while to discuss these ideas. The real question at stake is, Does the inoculation prevent cholera? Dr. Ferran took the Commission to his laboratory and showed them some of the fluid that he uses. They noticed some *spirilla* in it of different lengths, and that its color was yellow, and thick.

The Commission make some criticisms on Dr. Ferran's laboratory and his mode of work and the instruments employed. They were then taken to see Dr. Ferran inoculate some twenty nuns, and saw that he injected with a syringe in the postero-external aspect of the arm. The persons inoculated presented, after twenty-four hours, some troubles that were ill defined, so that in fact the inoculations seemed to be inoffensive.

The following is the result in three towns in Spain where they have the cholera at present, as given by Dr. Ferran:

Alcira, population about 23,000. Not inoculated, about 12,000: taken with cholera, 374; deaths, 169. Inoculated, 10,000: taken with cholera, 37; deaths, 7.

Alberique, population about 5000. Not inoculated, 4000: taken with cholera, 192; deaths, 73. Inoculated, 938: cases of cholera, 10; deaths, 2.

Algemesi, population probably 10,000. Not inoculated, about 9000: taken with cholera, 484; deaths, 208. Inoculated, 1202: cases of cholera, 21; deaths, 5.

On the Use of an Antiseptic Powder in Place of Iodoform.—Dr. Lucas Championnière, at the last meeting of the Société de Chirurgie, gives the following formula for a powder to be used in place of iodoform alone:

℞ Iodoform (triturated),
Cinchona powder,
Benzoin powder,
Powder of carbonate of magnesia that has been saturated with essence of eucalyptus.
S.—Equal parts of each.

With this he uses the German wood-lint prepared. He first puts the powder on the wound, and covers it with the prepared wood-lint.

M. Gillet followed by stating that he used a powder composed of iodoform, powdered charcoal, sulphate of quinine, and mint. M. Marc Sée said that he used simply a powder of the subnitrate of bismuth with satisfactory results.

"*The Odors of the Human Body in Health and Disease.*"—This is the title of a new and very original work of a French author, Dr. S. Monin, which shows what can be done in

the way of original research in a new path of medical investigation. It is only a small book, but contains some very instructive remarks in a field of study that is usually quite neglected. The nose, indeed, is not as much used in diagnosis as it can be, and the intelligent physician can gain quite a lot of information if he would be as much of a Paul Pry as possible. An instance given is the bedroom of a woman in confinement, when acid odor of the lacteal secretion would indicate that the secretion was inaugurated, and an ammoniacal odor would cause a fear of the dangerous fever coming on. All the various odors are considered,—of the skin, breath, oral and nasal, expectoration, vomits, eructations, fæcal matter, urine, the fact that typhus gives an odor of mice, the characteristic odor of cancer of the larynx, and much more that we have not space to tell of, but enough has been said to put your readers on a route of investigation that ought to interest them in a field of diagnosis that has been neglected in great part.

Hysterectomy for Uterine Cancer.—Dr. Tillaux, speaking at the Société de Chirurgie, gave an account of the above operation that he had just practised on a young woman of 20 who had a cancer of the cervix. The woman had metrorrhagia for six months, accompanied with a flow of a fetid liquid colored with blood. During this time her health broke down, and she had got very thin, having syncope often. Dr. Tillaux said, "On examination I found the os open as large as my finger, and walls ulcerated, having all the characters of a cancer. The *cul-de-sac* being free and the uterus being mobile, I thought it a favorable case for a complete extirpation of the uterus, and I proceeded to operate. The uterus was brought to the vulva (for this purpose I think that the large-mouthed pincers used in ovariotomy are the best, as they do not tear the tissue, which is already friable owing to the presence of the neoplasm). After having put a sound in the uterus to find its position exactly, I then cut the vaginal mucous membrane at its union with the neck of the uterus, and detached it from the os uteri, going up over its anterior face to the level of the attachment of the peritoneum, which I incised transversely. I did the same on the posterior portion, so that the uterus only held to the rest of the organism by the two broad ligaments. To cut these I introduced my finger into the peritoneum, and, passing back of the one on the right side, taking it up on my finger I passed the finger over after the other one. Over my finger I now slipped a ligature, and tied them all together. After I divided the mass, I united the two lips of the vaginal wound with one thread, putting a drainage-tube into the peritoneum. I filled the vagina with gauze (iodoformed), took away the drain on the fourth day, and in twenty-two days the patient left the hospital cured."

New Apparatus for the Treatment of Fractures.—Dr. Paul Meilhac calls attention to a very practical apparatus for fractures. It is one that is always at hand, and does away with a lot of hooks and bands that are often difficult to use. It is light, and elegant even, and costs almost nothing. It is simply the small cylinder of wood known as a "cache-pot," made of light slips of wood crossing one another in a diamond-shape that allows the whole to close up or open to surround flower-pots. It may be had for a few cents (plain) at any florist's. Opening it and then introducing the member is the work of a moment. It can then be closed, when the angles of the diamonds become sharper, but still leave space enough to see between. A few rows of plaster hold it in place. Of course the fractured member is first covered with a good coat of wadding, at least on two sides. Besides the compression, this apparatus makes an extension, which is due to its construction, and will often prove useful. It also furnishes good, strong points to suspend the member when needed.

On the Renewing of Prescriptions by Druggists.—After a long discussion on this subject, in which was shown the danger to the public of allowing chemists and druggists to fill any doctor's prescription as often as it is presented, the Société de Médecine has given the following as its opinion:

1. That when a doctor prescribes any substance that is susceptible of causing an accident, he must write in full the dose, and the way it should be employed, and also indicate how often the druggist should renew it.

2. That the druggist should be compelled to write on the prescription the number and date every time he fills it.

3. That all solutions intended for hypodermic injection must never be renewed unless the physician gives a new prescription.

It was further thought by several members that it would be wise for druggists not to renew any dangerous prescription from any one they did not know, and to insist that doctors who want the prescription to be renewed should write on it, "To be renewed according to the demand of the patient."

Preparation of Unguentum Hydrargyri.—M. Yvon says it is easy to get rid of the disadvantages of preparing mercurial ointment with grease by using black soap. The preparation is just as good, and it can be cleaned off much better. Care must be taken to choose a neutral soap.

Lactate of Quinine.—Dr. Vigier calls attention to this drug again. He had spoken of its good effects given in a one-per-cent. injection for chronic gleet. He now recommends it as the best of all the salts of quinine for hypodermic injections. He is surprised that

this preparation has not been long ago adopted, as it is the most soluble of all the alkaloids of cinchonia. In fact, if we compare the solubility of the lactate to the sulphate, it is a wonder its greater solubility has not made it more in favor. It is also a product that has a regular and exact constitution, and it may be used in the same doses as the sulphate with certainty of producing an effect. The difficulty with the sulphate is well illustrated by the pomades or ointments that are often recommended to be made with it. The chances are that they involve only time and money wasted, as it is almost certain that not the slightest effect will be produced by their use. The lactate is one of the oldest, best known, and most neglected of all the quinine salts, while it is apparently the best and richest in actual quinine.

The hypodermic injection keeps well, gives no pain, causes no inflammation, and does not produce an abscess. The following is Dr. Vigier's mode of preparing the solution for hypodermic use:

℞ Quininæ lactatis, 1 gramme;
Adipis præparati, 4 grammes. M.

S.—Dissolve by heat and filter. Each syringeful will contain twenty centigrammes of lactate of quinine, which is a reasonable dose; but it can be doubled if needed.

Decoction of Lemons in the Treatment of Blennorrhagia.—M. Jullien gives the following as the treatment of an Italian doctor: Take three good-sized, ripe lemons and cut them in pieces, skin and all. Put them into an earthen pot and add three hundred grammes of water. Press them with wooden presser, and let the decoction boil slowly over a mild fire until it is reduced to one hundred grammes. Press through a cloth, and throw away the solid part, keeping the liquid, which is the injection. The number of the injections given was three or four a day, and the injection must be made fresh every other day. Such is the new remedy to destroy the gonococcus, and it is said to be most efficacious. The author says it should be commenced at once, during the acute period, and that in a few days the microbes will disappear and the patient begin to get well. M. Jullien himself had made use of a formula like it, adding salicylic acid to keep the injection from fermentation. He uses it only in the last part of the disorder, and for gleet, as follows:

℞ Acidi citrici, 150 centigrammes;
Acidi salicylici, 5 centigrammes;
Aquæ, 250 grammes. M.
S.—Two injections daily.

Pomade for Retention of Urine.—

℞ Extracti nucis vomicæ, 4 grammes;
Adipis præparati, 40 grammes. M.

S.—One or two inunctions in the lower bowel with a piece as large as a walnut in case of retention or stasis of urine in the bladder.

Tannate of Mercury for Syphilis.—Dr. Leblond recommends the following, after trying it in some five hundred cases of secondary syphilis. He thinks it is better than the other preparations of mercury:

℞ Tannate of mercury, 3 grammes;
Ext. and powder of liquorice, q. s. M.
Make sixty pills.

S.—One or two pills twice a day after meals.

Menthol Cones in Paris.—One of the most popular medicines of the day in Paris is a little tube or crayon called "Antimigraineux," which is sold by the thousands; and one can see daily people in the street very industriously rubbing their foreheads and temples with them. And they certainly calm neuralgic pains. M. Mayet gives the following formula to prepare small plasters to take the place of these pencils. They are to be held on the painful part for a few moments:

℞ Menthol,
Chloralis, āā 50 centigrammes;
Spermaceti, 2 grammes;
Ol. cacao, 1 gramme. M.

T. Linn, M.D.

Paris, July, 1885.

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

Thursday Evening, June 11, 1885.

The President, Dr. Shakespeare, in the chair.

Cystic sarcoma of thigh.

Dr. H. R. WHARTON presented a large tumor removed from the posterior portion of the left thigh of a patient in the University Hospital, under the care of Prof. Ashhurst, with the following history. George H., aged 32 years; father living; mother died of meningitis; has brothers living and healthy. He noticed eight years ago a small tumor on the left thigh, posteriorly, about six inches above the popliteal space. Since that time it had gradually increased until it had become an oblong tumor larger than a man's head. The growth was accompanied by paroxysmal attacks of severe pain. He could not remember ever having received an injury at this portion of his body. The tumor was enucleated without difficulty, and in so doing about six inches of the sciatic nerve was laid bare, which was directly in contact with the sheath of the tumor. Some fibres of the semi-tendinosus and biceps muscles were stretched over the tumor. Upon examination, the tumor was found to consist of one large cavity, containing a reddish-brown fluid, surrounded by a thick fibrous wall varying in thickness from an inch to two inches, and at points presenting numerous points of calcareous degenera-

tion. The inner surface of this wall was lined with irregular flocculent masses. Microscopic examination proves it to be a spindle-celled sarcoma, with areas of calcareous degeneration scattered through it.

The principal points of interest in this case are the large size of the tumor, the slow course of its development, and the ease with which it was removed without injury to the surrounding structures.

Dr. TYSON said that he was much interested in the cystic feature of the tumor. It would be interesting to determine if this cyst, which is a typical example of the cysts by softening, has an endothelial lining. He also asked the nature of the fluid contents.

Dr. DE SCHWEINITZ replied that he had failed in his efforts to make satisfactory sections, owing to want of time for decalcifying the growth. He had determined, however, that it was unquestionably a spindle-celled sarcoma. The cyst's chocolate-colored contents had been spilled during the operation.

Dr. BARTON said that at the previous meeting Dr. Nancrede had exhibited two growths with a similar clinical history and analogous histological structure. It would be interesting to examine both growths with reference to the character of the walls of the blood-vessels, to ascertain if any light could be thrown upon the non-malignancy of the so-called recurrent fibroid tumor of Paget.

Dr. NANCREDE remarked that he had at the previous meeting specially called attention to the fact that the *so-called* recurrent fibroid of Paget is a small spindle-celled sarcoma. The position which such growths occupy—viz., the subcutaneous connective tissue—does not seem a satisfactory explanation of their non-recurrence. He was under the impression that a careful study of their vessel-walls would demonstrate that they more closely approached those of a fibroid tumor than those of other sarcomata, in not being merely channels through the tissue, directly or almost directly in contact with the tumor-cells. Dr. Nancrede thought that the term "recurrent fibroid" was a good clinical one as applied to a certain class of sarcomata, since other tumors much resembling them in histological character pursue a very different course.

Dr. TYSON said that he had early made a study of these growths, first known as fibroplastic tumors of Lébert, and later named by Paget "recurrent fibroid," but now correctly included among the sarcomata of Virchow. Dr. Tyson thought that the explanation of its non-malignancy was found in the fact that the physiology of sarcomata varies greatly in this respect, some being scarcely more so than certain fibromata, while others vie with the worst cancers in this characteristic. The former are represented by the hardest of the sarcomata, which again are the small spindle-celled, which may be said to be the type of the recurrent fibroid of Paget. He agreed with Dr. Nancrede that the term was a good clinical one, designating a small spindle-celled sarcoma recurring *in loco*, but seldom by metastasis.

Dr. FORMAD said that true tumors never have arteries or veins. Their blood-vessels are merely blood-channels without muscular walls, even in fatty tumors. The cancers are an exception to this. They have true blood-vessels and nerves, and hence are painful.

Dr. NANCREDE replied that, as Dr. Formad's statements were totally at variance with those of all reliable observers, he was not prepared to accept them at present, and still thought that careful study of the histology of the vessel-walls in the various sarcomata might reveal something of practical interest.

Dr. FORMAD said that to him the relative malignancy of these growths was plain. Spindle-cells can never move from their position, especially if the blood-vessels are small. The small round-celled sarcomata have small cells and are more vascular, and hence are very malignant,—*i.e.*, give metastasis. Giant-cells never travel.

Dr. SHAKESPEARE said that the suggestion of Drs. Nancrede and Barton as to a possible difference in the blood-vessel-walls of sarcomata of differing malignancy was doubtless based upon the well-known fact that these growths become generalized through the blood-channels. It seemed to him a matter of interest, and also raised a point which might be found of importance, if properly investigated, as explaining the clinical differences. It was indeed true that the tendency to malignancy from metastasis was in large part due to the ease with which cells could be detached from their place, and this has as much to do with metastasis as the supposed mobility of elements. As to the condition of the vessel-walls in recurrent fibroma, he was very sure that in the primary tumors, which have been, after removal, diagnosticated as pure fibromata, with numerous endothelial cells along the bands of fibrous tissue, recurrences have shown a change of type to perfect sarcomata: yet the blood-vessels in the first were those of connective tissue, while in the second they have the character of simple blood-channels.

Dr. HUGHES would like to call attention to the theory of a late German observer, that all sarcomata arise from the endothelia of blood-vessels. It is then easily understood how they become generalized,—the cells arising from the endothelium setting up the same change in the endothelium wherever they touch, while cells derived from other structures will have no effect. This distinction might be made between sarcomata remaining local and those becoming generalized, that the former arose from fibrous tissue, and not from endothelium.

Dr. NANCREDE desired to say, in conclusion, that he was perfectly familiar with the fact that mobility of cells had much to do with

malignancy, but he felt compelled positively to deny, upon the basis of experience, the so-called fact so positively asserted by Dr. Formad that large spindle-celled sarcomata never can become generalized, because from the form of their cells they must "stick" in the vessels. He had presented a specimen to this Society some years since of the most malignant growth he had ever had the misfortune to deal with (here followed history). He believed that Dr. Formad examined the specimen and had not then dissented from his opinion. He would relate other instances presented to this Society, but further remark was unnecessary, since all other observers except Dr. Formad had repeatedly called attention to the special malignancy of large spindle-celled sarcomata, except in certain situations. He would suggest that positive generalizations founded on any one observer's experience were apt to be delusive.

Specimens from a case of pneumonia. Presented by Dr. M. H. Fussell.

The subject from which the specimens were removed was a child, æt. 7 months, with a syphilitic history, who was attacked by convulsions. On the third day acute pneumonia developed, and death occurred on the twelfth day.

The autopsy showed characteristic lesions of catarrhal pneumonia in the right lung, with recent double pleural effusion and fibrinous deposit. The heart contained a chicken-fat clot extending into the pulmonary artery. There was also a limited area of pericarditis.

This case interested him from both its clinical and its pathological aspects.

Clinically, as to what relation the convulsions had to the lung-trouble. It was not until the third day after the first convulsion that any evidence of lung-trouble appeared, and until that time the patient was not apparently seriously ill between the convulsions. The lung-lesion was not *overlooked* until the third day, because he had made a careful examination at each visit. At first he supposed it likely the convulsions were due to the syphilitic taint, because of the absence of anything else to explain them; but the subsequent history of the case proved that they actually marked beginning of the lung-trouble. The entire absence of any cerebral symptoms in the progress of the case would go to prove this.

Pathologically, the case is interesting from the unusual amount of tissue involved in the pneumonic process, for it is the rule in cases of catarrhal pneumonia to have scattered patches of consolidation instead of, as in this case, almost an entire lung. It is also interesting to trace the sequence of the lesions found. Doubtless the first trouble was a bronchitis. This was soon followed by the pneumonia, which in turn gave rise to the pleuritis. The pericarditis doubtless arose from the irritation caused by the inflamed portion of pleura overlying the base of the heart, for immediately under this spot is the seat of the greatest disease in the pericardium. So here the disease spread by both continuity and contiguity of tissue.

Dr. Musser said that he could recall a case in some respects very similar. It was one of purulent pericarditis and pleuritis in a child aged 8 years, who had been rendered ill by exposure to cold seven days previous to Dr. Musser's first visit. In the early history there were nervous symptoms so prominent as to lead to a diagnosis of cerebro-spinal meningitis. During the first week of Dr. Musser's attendance typhoid symptoms were marked, —rapid respiration, extreme dyspnœa, rapid pulse. Purulent pleuritis was proved by the hypodermatic needle. Under stimulants, the child improved, but occasional dysphagia, pulsation of the veins of the neck, evanescent and—later—persistent aphonia were noticed. The heart was not displaced. Dr. Musser did not make out the pericarditis. The child died suddenly of heart-clot. At the post-mortem, pus was found in the left pleura and pericardium, and no connection or evidence of extension, such as was found in Dr. Fussell's case, was detected here. The pericardial effusion had been overlooked. What, then, would have been the result of pleural tapping? The amount of pericardial effusion would certainly have influenced unfavorably the withdrawal of fluid from the pleural cavity, sudden death resulting. Hence a pericardial effusion should be looked for in all cases of pleural effusion, and in its recognition stress should be laid on the non-displacement of the heart, the absence of apex-beat and impulse, the presence of the pulsating veins in the neck, as well as aphonia and dysphagia, pressure-symptoms arising from a large pericardial effusion.

Two specimens of sarcoma of the choroid. Presented by Dr. G. De Schweinitz.

Dr. William L. Norris kindly permits me to exhibit these specimens, both the patients from whom they were removed having been under his care, the one in private practice and the other in the University Hospital.

J. McF., aged 21, applied for treatment at the Eye-Dispensary of the University Hospital three weeks ago. He stated that for three months the vision of his left eye had been gradually diminishing, and for the last month the eye had been totally blind. This loss of sight was accompanied by no pain in the eye; neither did he suffer from headache or ciliary neuralgia, nor was his own general health or nutrition in any way impaired. His occupation was that of a weaver, but there was no history of injury or inflammation. He was examined by Dr. S. D. Risley and myself, and the following account is taken from Dr. Risley's description at that time. The vision of the right eye was normal ($\frac{20}{xx}$); in

the left eye there was absolutely no light-perception. The pupil, under the influence of a solution of homatropin, dilated widely, but not so completely up and in as elsewhere. Using transmitted light, the eye looking directly in front, there was not the slightest reflex from the eye-ground. When the eye was slightly turned down, a small area of the ordinary red reflex was seen below, shut off above by an abrupt dark line curved downward. In this space detachment of the retina was easily detected. Oblique light showed a reddish-brown mass occupying the upper and inner half of the eye-ground, coming almost to the posterior plane of the iris, so near as apparently to exclude the lens. This, however, was present and not opaque. When the eye was strongly rolled down, the upper lid raised. Palpation over the ball detected an area of increased resistance and density as compared with the remainder of the eye. Over this region the perforating branches of the anterior ciliary vessels were enlarged and markedly tortuous. The general tension of the ball was not increased, apparently. The diagnosis of intraocular tumor was made, and the patient advised to have the eyeball enucleated. To this he consented, and Dr. Norris performed the operation. The optic nerve was cut off one-half inch from the ball, and the succeeding hemorrhage rendered the tissue about the oblique muscles so tense as to make it doubtful in the case of the superior oblique whether this thickening was due to escaped blood or to infiltration of the new growth. This suspicious orbital fat was removed. On section of the eye, the cavity is seen to be occupied by a melanotic sarcoma growing from above and out, leaving a small space posteriorly above and below, with detached retina and subretinal fluid.

The second case was removed by Dr. Norris from a girl aged 18. The history of the duration of the tumor is deficient. Here the new growth almost entirely filled the eye. The sections exhibited to-night show that the growth is composed of round spindle-cells, many of the cells of an epithelial type, and portions of the tumor separated into an alveolar arrangement by a fine vascular structure. The tumor may be classed as an alveolar sarcoma. The optic-nerve entrance shows atrophy of its elements, but no true infiltration by the new growth. A year after the operation no return *in situ* had occurred.

Dr. TYSON had examined the specimens with interest, and was at first at a loss to name the growth, as there were round cells of a connective-tissue type, epithelioid cells, and some suggestions of an alveoloid arrangement.

Dr. FORMAD thought that the growth should be classed as an alveolar sarcoma.

Dr. TYSON thought it was an alveolar sarcoma, the sarcoma carcinomatoides of Rindfleisch and others.

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Dr. SHAKESPEARE said that the growth was a most extensive combination of epithelioid and connective-tissue elements, evidently springing from the choroid, leaving the hexagonal choroidal elements untouched. There was also an evidence of dilatation of the blood-vessels and filling up of their lumina with detritus and perhaps proliferated endothelial cells and leucocytes. In one portion of the growth there is a channel with as perfectly-formed cylindrical cells as in an adenoma or cylindrical epithelioma. The fact that the patient has lived over a year since the removal of the eye free from disease would lead us to believe that the growth was benign. Whether it can be positively classed as a sarcoma was doubtful. By following around the section there can be no doubt that in the position represented by the section the retina is not affected, as the hexagonal layers of choroidal cells can be traced unbroken.

Dr. DE SCHWEINITZ said that the retina was certainly not affected.

Dr. SHAKESPEARE said that the non-recurrence of the growth was also against its sarcomatous nature, as the alveolar sarcoma was the one most certain of all to become generalized; besides, the growth contained germinal epithelial cells.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held May 27, 1885, the President, JOHN A. WYETH, M.D., in the chair.

EPITHELIOMA OF THE TONGUE.

Dr. C. W. KNIGHT presented a portion of the posterior part of the tongue, the seat of epithelioma, removed after ligation of the inguinal artery from a man 60 years of age. Before the operation pain had been relieved by the application of cocaine.

LIPOMA OF THE BACK.

Dr. L. WALDSTEIN presented a lipoma removed by Dr. Lange from the back of a woman 86 years of age. The tumor was the seat of an incurable ulcer, and had given rise to pain and other symptoms. The operation-wound had healed by first intention. The case illustrated the fact that fatty tumors might be present in persons markedly emaciated without becoming diminished in size.

ADENO-CARCINOMA OF THE STOMACH.

Dr. WALDSTEIN presented a second specimen, consisting of diffuse carcinoma of the stomach, the fungoid masses being present principally at the fundus and cardiac end: the pylorus was patent. The carcinomatous mass had evidently grown very rapidly. There were large quantities of granular detritus from the division of the nuclei, which had sometimes been mistaken for micro-organisms. There had been jaundice, supposed to be due

to carcinoma of the liver. A tumor about the size of a pigeon's egg was detected in the right mammary line; but this tumor was found to be the distended gall-bladder, the duct of which was partially obstructed by pressure from metastatic growths on the lymphatic glands in the porta hepatis.

DIPHTHERIA.

Dr. JOSEPH E. WINTERS presented the lungs of a child nearly 2 years old which had died of diphtheritic laryngitis of about two weeks' duration. During the first eight or ten days of the disease, the membrane, very tough and thick, was limited to the fauces; but finally croupy cough developed and dyspnœa became marked. Tracheotomy was proposed, but was rejected by the child's father. Death was due to exhaustion and asphyxia. At the autopsy the lungs filled the thorax well. Very little pseudo-membrane was seen above the vocal cords. For three-quarters of an inch below the cords there was considerable exudation; farther down there was only muco-pus and marked vascularization. The roots of the lungs and posterior surface of the bases were congested, while the anterior surface was distended and anæmic.

Dr. C. C. LEE asked Dr. Winters what had been his experience with Dr. O'Dwyer's laryngotomy-tube.

Dr. WINTERS had not endeavored to employ any of the tubes, they having been discarded so completely in France.

Dr. LEE thought this was scarcely just to the tubes employed in this city, where they had relieved symptoms and saved life where laryngotomy would probably have proved fatal. He would not say that the laryngotomy-tube would cure diphtheritic laryngitis; but he thought it might be employed in cases like the one described by Dr. Winters, where the parents refused tracheotomy.

Dr. NORTHRUP said that at the New York Foundling-Asylum the tube had been found to relieve urgent laryngeal symptoms almost immediately, even in cases in which the autopsy showed the presence of the membrane from the glottis to the finest bronchi.

MULTILOCULAR CYSTOMA OF THE RIGHT OVARY, WITH HYDROSALPINX, AND CYSTIC DEGENERATION OF THE LEFT OVARY, WITH SIMPLE SALPINGITIS.

Dr. R. W. WILCOX presented the specimens, removed from a woman 37 years of age, married, never pregnant, who had enlargement of the abdomen for fifteen years, which during the last two years interfered markedly with locomotion. Her physician treated her for dropsy, giving diuretics, which caused acute nephritis, from which the patient was suffering, together with general peritonitis, when first seen by Dr. Wilcox. The diagnosis of ovarian tumor was easily made, and Dr. Thomas operated, removing a tumor of the right ovary weighing about forty-six pounds, which contained fluid of the "flax-seed-tea" variety. The tube was adherent to the tumor, and contained a yellowish fluid. The left ovary was also cystic, the tube adherent. There was a well-marked corpus luteum, menstruation having taken place ten days before the operation.

POTT'S DISEASE, WITH NECROSIS OF THE PRINCIPAL LONG BONES.

Dr. W. P. WATSON presented some specimens removed from the body of a child 5 years of age, which first came under his observation when three years old, when it was suffering from abscesses over the right thigh and over the right and left wrist, and from marked curvature of the cervico-dorsal spine. Extension produced marked relief. Finally, however, it became necessary to excise for necrosis a part of the right radius, the right knee, and the lower portion of the right femur. Death finally resulted from pneumonia, when there was found marked absorption of the bodies of the fifth, sixth, and seventh cervical and first and second dorsal vertebræ. There had been no paralysis, and the small amount of compression of the cord which was present in so great a curvature was remarkable.

THREE SINGLE AND FOUR TWIN PREGNANCIES IN SIX YEARS.

Dr. WATSON also presented a fœtus of the sixth week, expelled by an Englishwoman of robust health, who had had three single and four twin pregnancies in six years. Only two of the pregnancies, single ones, went to full term. The woman entered the hospital to be operated upon for bilateral laceration of the cervix, which was done on May 21. She had menstruated on March 27 and May 1. Pregnancy was not suspected, but a few days after the operation a six-weeks' fœtus was expelled.

A microscopic slide illustrating

INTRA-MENINGEAL HEMORRHAGE

was exhibited by Dr. W. P. NORTHRUP.

CELLULOIDIN IN MICROSCOPIC WORK.

Dr. W. P. NORTHRUP also presented a portion of the right lung, the whole of which had been hardened with celluloidin, enabling the examiner to make a complete section through the base. The process of hardening consisted in leaving the lung over-night in water, then for a number of days in a weak solution of alcohol, then in celluloidin, and again in alcohol.

THROMBOSIS OF THE LEFT CORONARY ARTERY; INTERSTITIAL MYOCARDITIS; FATTY DEGENERATION WITH DILATATION OF THE HEART.

Dr. J. F. RIDLON presented the specimen, removed from the body of a man 55 years of age, who had for some years suffered from

symptoms of dyspepsia. Some months prior to death he had been in good health. One morning he felt pain in the region of the stomach, and vomited. These symptoms were finally controlled, and the next morning he was feeling much better, but half an hour later was found dead. The autopsy showed a thrombus of the left coronary artery half an inch in length, marked enlargement of the heart, with interstitial myocarditis and fatty degeneration. The abdominal organs were larger than usual, but had not yet been examined microscopically.

MULTIPLE TUMOR OF THE UTERUS.

Dr. C. C. Lee presented the specimens, removed from a quadroon 26 years of age, of delicate constitution, and greatly reduced in health from an abdominal tumor, which was diagnosticated by Dr. Lee to be an ovarian tumor, although he had never seen a pure ovarian cyst in the negro race. At the operation a multiple tumor was found, which had probably begun as a fibro-cyst and undergone colloid and partial cystic degeneration. At one point there was evidence of dermoid complication. The uterus had to be removed with the tumor, and, notwithstanding the patient's low condition, there had been no unfavorable symptoms since the operation, which was performed a few days ago.

EXCISION OF THE HIP-JOINT.

Dr. L. H. Sayre presented the remains of the head of the femur, etc., in a case of morbus coxarius, in which he had performed exsection at the hip-joint. The patient was 8 years of age, of phthisical family, born prematurely, and had suffered for a number of years, undergoing treatment by apparatus, etc., at the hands of various physicians. He had done well since the operation, which was performed two or three weeks ago.

Dr. Sayre also presented portions of the acetabulum and upper part of the femur, which had undergone necrosis, removed by exsection in the case of a girl 8 years of age, who had for some years undergone treatment by apparatus at the hands of physicians in different sections of the country. Abscesses had formed on the thigh, and the child had suffered greatly. The operation of exsection being performed, the limb was put up in a wire cuirass. The patient is doing well.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held June 18, 1885, the President, A. Jacobi, M.D., in the chair.

OBSERVATIONS ON THE OPERATION FOR LACERATED PERINEUM.

Dr. H. W. Mitchell read the paper, and described the result of laceration of the perineum in the production of rectocele, and also to some extent in the production of cystocele. As to the operation for the repair of this laceration, he thought it quite simple, and that any surgeon with a fair degree of skill and knowledge of the parts could perform it. The left forefinger was introduced into the rectum, and while two assistants made traction upon the lacerated parts the surgeon pared off the mucous membrane on each side by means of a curved pair of scissors, after which he would proceed to pass silver-wire sutures threaded on a curved needle. He thought that first to pass a silk suture and to draw the loop of wire through by means of this was a clumsy procedure. The sutures were passed, beginning at the rectum, the ends of the wires twisted, left projecting about an inch, matted together, and protected by cotton. They should be passed deeply, so as to make a firm body. Superficial sutures of silk approximated the edges of the wound. The operation was performed many years ago by Dr. Isaac E. Taylor, by Dr. Thomas, and by many others, and was simple, and gave successful results. He gave the histories of forty cases, in all of which union took place by first intention. In a number the lacerated cervix uteri was united at the same time. In only five were antiseptics other than cleanliness employed. The bowels were confined after the operation. The wires were withdrawn about the sixth or seventh day. The operation was secondary. The patients suffered very little pain.

Dr. A. C. Post, being requested to open the discussion, said the eminent success of the author's operations seemed to preclude criticism of the details of the operation or of the non-use of antiseptics. He preferred to keep the bowels free, and believed that this was now the custom. He was still inclined to favor the operation which he described before the Academy last winter.

Dr. Malcolm McLean asked the author how he accounted for the absence of pain in his cases, which other operators were so much troubled with when the sutures were passed outside of the mucous tissue. He thought it somewhat strange that Dr. Mitchell had found the ordinary method of passing the silver wire disadvantageous, when all other operators made use of it in preference to threading the wire directly on the needle. He also thought the curved needle objectionable, in that it turned in the forceps and was liable to break. The modern method of straightening the tissues and passing the straight, stiff needle was much better.

Dr. Simon Baruch, by invitation, thought the bowels should be kept open; that the straight needle was preferable to the curved one; and that Dr. Emmet's late method of passing the sutures only through the mucous tissue was preferable, and gave the patient little pain. He thought the author deserved credit

for his wonderful success, for his desire to simplify the operation, and for his discarding the old notion with regard to the perineal body being the support of the uterus.

CONTAGIOUS CONJUNCTIVITIS.

Dr. JOSEPH A. ANDREWS read a paper with this title, in which he first referred to the interest which the subject was attracting at the present time, and then proceeded to give some of the results of his experiments with the gonococcus in the production of ophthalmia, and also to review the literature of the germ-origin of the disease. Only a few instances were on record in which a pure gonococcus culture had caused gonorrhœal conjunctivitis in the human subject, and one of the successes obtained in this direction occurred in his own investigations. It appeared that the conjunctiva of animals could not be inoculated with the gonorrhœal discharge. The large number of cases of ophthalmia in the newly-born was pointed out, and its connection with the vaginal discharges seemed to be well established from statistics. In European institutions, and also in those of New York, it had been shown that cleanliness and means to destroy the activity of the contagion, as it might be communicated from the vaginal secretions to the child's eyes, had done very much towards wiping out eye-diseases in the children of such institutions. The percentage of cases of ophthalmia when such precautions were not taken was large, reaching as high as ten or more in a hundred, but with such precautions scarcely any cases occurred. Besides strict cleanliness in other respects, the child's eyes should be washed with a saturated solution of boric acid, and painted over with a two-per-cent. solution of nitrate of silver. As so many women were attended by midwives in this city, the special attention of this class of people should be called to the necessity for strict cleanliness, and for immediately reporting to a physician should the child's eyes become affected. When purulent conjunctivitis was fairly established, the indications were, first, to wash away the infected material as early and as thoroughly as possible; second, to render the conjunctival surface as nearly as possible aseptic. The washing might be done with a saturated solution of boric acid, or a two-per-cent. solution of carbolic acid, reducing the strength of the latter as the discharge decreased. The solution of nitrate of silver was two per cent., but if the case were severe it might be increased to four per cent., taking the precaution afterwards to wash with chloride of sodium. The after-dressing was by boric acid and vaseline. Lint off of ice might be applied to cool the eyes. Ice itself should not be used. Avoid ulceration of the cornea by division of the canthus, etc.

The Society then adjourned until the first Thursday in October.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

THE American Laryngological Association held its Seventh Annual Congress in Detroit, Michigan, from June 24 to June 26, inclusive. Dr. E. L. Shurley, of Detroit, President of the Society, delivered a brief address of welcome at the opening of the Congress.

Dr. Shurley, giving the chair to the Vice-President, read a communication entitled *The Use of Galvanism in Chronic Diseases of the Pharynx.*

Having used galvanism for many years in pharyngitis sicca, he was led to employ it in other diseases of the pharyngeal mucous membrane characterized by glandular hypertrophy, hyperplasia, hypersecretion, and atrophy with diminished secretion. These constitute trophic disorders which are distinctly local, and may be benefited by local treatment, glandular hypertrophy and atrophy being attributable to perverted nervous function. He had employed various agents to correct these conditions, and of them all he had gained the most lasting effect from galvanism. He had also had good results from this treatment in severe forms of nasal catarrh, with engorgement and hypersecretion, and even in distinctly neurotic affections like paræsthesia he had found it beneficial. He recommended the prior use of cocaine solution before introducing the electrodes. He begins with two Léclanché cells, and gradually goes up to four or five, repeating the applications two or three times a week.

Dr. F. H. Hooper, of Boston, next read a paper entitled *The Respiratory Function of the Human Larynx.*

This paper was based upon a series of experimental studies in the Physiological Laboratory of Harvard, and was an inquiry into the physiological action of the abductor and adductor fibres of the recurrent laryngeal nerve, and particularly as to the relative frequency of disease in the two sets of fibres. His investigations led him to distrust statements which had been made regarding the proclivity of the abductor fibres to become diseased, and he pointedly observed that if unilateral paralysis of the abductor muscles were really such a common lesion, bilateral paralysis should not be so rare an affection. The term "extensor," as applied to an intrinsic laryngeal muscle, he considered incorrect. The movement of the arytenoid cartilages is one of rotation, not of abduction and of adduction. The posterior crico-arytenoids maintain the respiratory patency of the glottis, and are constantly in a state of semi-contraction: they are respiratory muscles with a special function. The rarity of disease of this muscle is a part of the immunity granted to the respiratory muscles, which, on account of their importance to life, are the latest to be attacked in various progressive, general, nervo-muscu-

lar diseases. Possibly a future investigation of this subject from the clinical stand-point may show that the positions which immobile vocal bands may assume may be explained on another hypothesis than that of paralysis of the abductor muscles.

Remarks were made by Drs. J. Solis Cohen, Harrison Allen, E. Fletcher Ingals, and B. Delavan, and the debate was closed by Dr. Hooper.

Dr. H. A. Johnson, of Chicago, read a paper on *Some of the Motor Derangements of the Larynx, with Cases.*

In this communication various illustrative cases were cited of the more common motor derangements occurring in the larynx, with suggestions for therapeutics based upon personal observation and experience.

Dr. Wm. C. Glasgow, of St. Louis, read a paper on *Certain Vaso-Motor Disturbances of the Nasal Membrane.*

In this paper three selected cases were reported to illustrate different types of nasal disorder in which inflammation was not present. He had noticed a series of cases characterized by great swelling and a profuse discharge of limpid fluid. These cases are analogous to hay-fever, and, in his opinion, are allied to it in their etiology and mechanism. He concluded that the condition is one of contraction of the arterioles due to increased tone of the vessels, caused by augmented action of the constrictors, the minute vessels being in a state of spasm and dilatation. The general arterial tension is increased, and the cavernous bodies of the mucous membrane become infiltrated with leucocytes and liquor sanguinis; to which must be added the liquefaction and increase of glandular secretions as the result of gland-stimulation. This theory of spasm of the arterioles is supported by the fact of the favorable action of remedies like atropine, which favor arterial dilatation.

Drs. Roe, Robertson, Mackenzie, and Allen discussed the paper.

Dr. John N. Mackenzie, of Baltimore, read the next paper, entitled *Reflections on the Etiology of Simple Inflammatory Affections of the Upper Air-Passages.*

Catarrhal affections of the upper air-tract he considered as a disease as old as the human race, perpetuated by predisposing and exciting causes which are still in operation; and the evolution of nasal, pharyngeal, or laryngeal disease in a given country is a part of its local history, and goes on *pari passu* with its varying meteorological conditions. After discussing the relationship of nasal and pharyngeal diseases to various forms of cachexia, and their dependence upon exciting causes proceeding from various sources, he declared that catarrh diathesis may be looked upon as a generic term for a multitude of varied physical peculiarities. Apart from direct local irritation as a cause of inflammation, he claimed that it may be regarded as a law that the vast majority of catarrhal, pharyngeal, and laryngeal diseases originate primarily in inflammation of the nasal cavities, and he cited a number of cases to show that the chronic catarrhal inflammation is not due to any one special and particular cause, but is the resultant of the action of a number, both internal and external.

Drs. Cohen, Johnson, Ingals, Glasgow, and Allen participated in the discussion.

Dr. D. Bryson Delavan, of New York, read a paper on *Erysipelas of the Larynx and Pharynx.*

Two cases of this rare disease were reported in this communication. In one it commenced in one tonsil, in the other in the larynx. Both cases recovered; but in the first case the inflammation extended to the meninges and became chronic. The case became and remains insane.

In the discussion of the paper Dr. Cohen suggested the employment of pilocarpin hypodermically.

Second Day.

The Librarian reported a flourishing condition of the library, it having been more than doubled since the last report.

Dr. Frank L. Ives presented the report of *A Case of Submucous Laryngeal Hemorrhage complicated by Cyst*, which was read by title and referred for publication.

Dr. Harrison Allen read a paper entitled *The Galvano-Cautery in Laryngological Practice*, in which, after discussing the special advantages of this mode of treatment, he described a new galvano-cautery snare, a modification of Jarvis's instrument, which can be used either as an écraseur or as a cautery.

The Principles involved in the Construction of Spray-Tubes were discussed in a paper presented by the Secretary for the author, Dr. Andrew H. Smith, of New York.

A number of new instruments and devices for applying the electric light were exhibited. Dr. Cohen showed a galvanic accumulator; Dr. Hooper showed the electric lamp and portable accumulator of Dr. Felix Semon and Mr. Vesey, made by J. Weiss & Son, London; Dr. De Blois presented a powder-blower combined with a laryngeal mirror; and Dr. Asch presented an osteotome and a modified Jarvis's snare. A number of other instruments were shown and discussed by the Fellows.

Dr. E. Fletcher Ingals, of Chicago, at the opening of the afternoon session, read a paper on *Leucoplakia Buccalis et Linguæ, or Ichthyosis Linguæ—Successful Treatment by Galvano-Cautery.*

In discussing the differential diagnosis of this disease, which has been recognized only for a short time, he defined it as a chronic affection of the buccal mucous membrane, characterized by thickening of the epithelium and the formation of white opaline elevated

patches, which usually become fissured and painful, and, after continuing for a long time, are apt to terminate in epithelioma. Two cases were mentioned in which cancer supervened in less than six months.

In the treatment, all sources of irritation are to be removed if possible, the digestive organs being often disordered. Permanent relief is afforded by the application of the galvano-cautery, and by its persistent and careful use the disease may be eradicated.

He concluded that (1) leucoplakia buccalis is an idiopathic disease, distinct from psoriasis, "smokers' patches," and syphilis. It is largely confined to men past middle life, but occurs occasionally in women. 2. The disease is so commonly found among inveterate smokers that the abuse of tobacco may be fairly claimed as an exciting cause, though cases also occur where tobacco has never been used. 3. It is chronic, and finally terminates, in a majority of cases, in epithelioma. 4. Internal treatment and local applications of sedative, stimulant, or caustic drugs are either useless or injurious, and the latter may hasten the development of epithelioma. 5. The actual cautery or galvano-cautery will probably enable us to cure many cases, if early and carefully applied, so as not to destroy the healthy tissue beneath the changed epithelium.

A general discussion followed this communication, the conclusions of which were generally accepted.

Dr. R. P. Lincoln, of New York, reported the details of a *Case of Melano-Sarcoma of the Nose cured by the Galvano-Cautery.*

This large growth was removed from the right nostril. It sprang originally from the inferior and middle turbinated bones and floor of the meatus; the septum was not involved. A year later there had been no return of the disease.

Dr. J. O. Roe, of Rochester, reported a case of the removal of an angioma from the nasal cavity, with an extended bibliography.

Dr. J. W. Robertson, of Detroit, read a paper on *Deformities of the Nose as a Factor in Nasal Catarrh.*

Premising the fact that catarrh admits nasal deformity as a factor, the lecturer proceeded to show that the causes of such deformity were frequently remediable, a large percentage being due to traumatism, syphilis, scrofula, tuberculosis, and allied diseases, causing necrosis, ulceration, and improper development. The age at which the deviation occurs is usually from the tenth to the twentieth year of life. The retention of secretions and dust leads to the production of catarrh, in the treatment of which hygienic measures, as well as appropriate treatment, are required. In children, care should be taken that the bony structures of the nose are properly developing.

Dr. Clarence Rice, of New York, read a paper describing a successful case of operation for the removal of *Inflammatory Adhesions of the Soft Palate to the Wall of the Pharynx,* in which a tribute was paid to the late Dr. Elsberg as a successful and skilful operator upon these cases.

Third Day.

Dr. Beverly Robinson, of New York, presented a paper on *Alimentation in Laryngeal Phthisis.*

The writer advocated the use of cocaine to the ulcerated parts, in order to allow the patient to swallow more comfortably, but deprecated the use of tubes, preferring to employ nutritive enemata.

A paper by Dr. F. H. Bosworth, on the *Therapeutic Action of Cocaine,* and one by Dr. G. W. Major, on *Membranous Nasal Catarrh,* were read by title.

Dr. S. Solis Cohen read a practical paper entitled *Personal Experience with Some Recent Additions to the Materia Medica of Laryngology.*

Dr. J. S. Cohen opened a discussion on *The Efficiency of Mild Measures in the Treatment of So-Called Nasal and Naso-Pharyngeal Catarrh.*

An ingenious method of distinguishing hypertrophy from turgescence was described: it was by the introduction of a laminaria tent proportionate to the size of the nasal cavity. The lecturer believed that less radical measures than those now in popular use might often be resorted to with advantage.

The discussion was a spirited one, and the views expressed by Dr. Cohen were generally approved.

The following officers were elected:

President, Harrison Allen, M.D., of Philadelphia; *First Vice-President,* H. A. Johnson, M.D., of Chicago; *Second Vice-President,* Geo. W. Major, M.D., of Montreal; *Secretary and Treasurer,* D. B. Delavan, M.D., of New York; *Librarian,* Thos. R. French, M.D., of Brooklyn, N.Y.; *Member of Council,* J. Solis Cohen, M.D., of Philadelphia. The next annual Congress to be held on the last Thursday in May, 1886, in Philadelphia.

The Society then adjourned.

AMERICAN OTOLOGICAL SOCIETY.

THE Eighteenth Annual Session of the Society was held at the Pequot House, New London, Connecticut, July 14, 1885, the President, Dr. C. H. Burnett, in the chair.

Inflammation of the Attic of the Tympanum. By Samuel Sexton, M.D., New York.

The speaker considered the disease under two headings, acute and chronic inflammation of the attic, the latter presenting itself in the form of deep sinuses, leading from the inner end of the canal up into the attic, into the antrum, and sometimes penetrating the

membrana flaccida. This is often the result of acute inflammation in early life.

The atticus tympanicus is that portion of the tympanum lying above a plane extending transversely from the prominence of the inner wall formed by the external semicircular and facial canals to the auditory plate on the outside. Beneath this plane lies the atrium tympanicum; over the attic arches the tegmen, which also covers the antrum, the petro-mastoid canal, a varying number of cellules, and the Eustachian tube. The attic communicates freely with the antrum by means of the petro-mastoid canal of Sappey. The mastoid antrum lies behind and to the outer side of the attic, in the spongy substance of the mastoid. It is usually larger than the attic, and, as a rule, extends downward among the cellules of the mastoid process, giving off frequently a small passage communicating with the cellules overlying the external auditory meatus. The attic is divided below into two compartments (the inner being the larger) by the incus and malleus, the cord, ligaments, etc., which form a partial partition standing fore-and-aft. These compartments communicate freely with each other overhead, with the antrum below, the Eustachian tube in front, and with the antrum behind. The outer compartment is wedge-shaped, larger above, and shut in below by the close approximation of the large ossicles to the auditory plate, except anteriorly and posteriorly, where two small openings allow drainage into the atrium below. The inner compartment also communicates with the atrium by an elliptical opening surrounded on the inner side by the facial canal, and on the outer by the large ossicles, the cord, ligaments, etc. All of these cavities are lined throughout with mucous membrane.

Acute inflammation of the attic may follow catarrh of the head, the exanthemata, the entrance of fluids propelled along the Eustachian tube in bathing, or from the use of the nasal douche. The occurrence of inflammation of the attic from these causes is readily accounted for when we remember that the Eustachian tube opens by a free sweep into the attic as well as into the atrium. Irritating fluids seem to be better borne in the lower than in the upper part of the tympanum. Inflammation of the attic may be simultaneous with, consecutive to, or independent of inflammation of the atrium. It is the more serious from the fact that swelling of the mucous membrane clogs the outlets and prevents drainage. In such cases the membrana flaccida is red, the vascular turgescence extending above into the external auditory canal, and sometimes downward about the short process of the mallet. Should the disease progress farther, the inflammation may extend beneath the margo tympanicus of the auditory plate, followed by effusion of serum and blood pressing away the membrana flaccida and integument of the canal, and producing a bulging sac, so great sometimes as entirely to conceal from view the membrana tympani. In some cases rupture of blood-vessels leads to a sudden extravasation of blood.

Periostitis of surrounding parts may occur and extend along the surfaces of the canal. Inflammation may extend downward to the atrium, but as long as this does not happen and the membrana tympani is unaffected, there may be little deafness, though autophonia may be present. In nearly all cases inflammation extends into the antrum and mastoid cellules, or those overlying the external auditory canal or in the tegmen. If the escape of secretions into the atrium or Eustachian tube is prevented, the case is more severe, and extension to the cranial cavity more to be feared. Inflammation of the antrum often persists after the tympanum has healed, drainage taking place through the Eustachian tube or by a sinus through the cortex of the mastoid.

The treatment consists in drainage and the employment of such constitutional remedies as tend to check the inflammation and prevent the formation of pus, as aconite, calx sulphurata, etc.

Owing to the impossibility of making an accurate differential diagnosis between the pains of pachymeningitis and neuralgic pains of otitis media, the surgeon should be cautious about trephining the mastoid where pain is the only indication. It is manifestly useless to trephine after pachymeningitis has appeared. This question is one which must be left to the judgment of the attending surgeon.

DISCUSSION.

Dr. B. St. John Roosa, New York, asked Dr. Sexton to describe a case, indicating the manner in which he would use the remedies.

Dr. Sexton stated that the remedies are given in small doses, but these are frequently repeated. In this way the effect is quickly obtained. The moment there are symptoms of purulency he used the calcium sulphide, and thinks it controls the process.

Dr. Charles J. Kipp, Newark, was surprised to hear nothing said of inflation of the middle ear. This relieves the pain. Where there is protrusion in front of the membrane, incision gives relief to the suffering.

Dr. Theobald, Baltimore, had found the instillation of a warm solution of atropia of great service (four grains to the ounce). With this cathartics may be combined with great benefit. He had also used the pyrophosphate of sodium in fifteen-grain doses every two hours, keeping it up for four or five days, in cases of inflammation of the middle ear with the threatened mastoid implication, and was convinced that it is of real value.

Dr. C. J. Blake, Boston, spoke of the reduplication of the mucous membrane in the upper portion of the tympanic cavity, which

serves to separate the upper portion of the tympanic cavity from the lower, but tends to retain secretions. Dr. Sexton had not referred to the acute congestions of the upper portion of the tympanic cavity. He had lately observed a series of cases of this condition in which there was a history of overstrain and nervous exhaustion.

Dr. Sexton said, in conclusion, that he had used mercury and the sulphide of calcium for the last ten years largely, and was convinced that they are beneficial in certain cases.

The Treatment of Chronic Otitis Media. By W. W. SEELY, M.D., Cincinnati.

The speaker concluded his interesting paper with the following:

1. That only experience of sufficient length of time (often lasting over months) in each case can determine whether treatment shall be continuous (daily) or interrupted,—*i.e.*, perhaps daily for a week, followed by an interruption of some weeks or months.

2. Only experience in each case can inform us whether treatment is to be entirely directed to the middle ear, or entirely to the naso-pharynx, or combined against both.

3. Only experience in each case can inform us whether injections into the cavitas tympani are called for. Under this head it was stated that direct medication, either of the middle ear or of the naso-pharynx, as routine treatment, was unwise till simple inflation had failed.

4. Mechanical dilatation of the tubes is rarely necessary or advisable. Only in extremely dry states of the tube is dilatation followed by much success.

5. Hearing-tests are not reliable, and hence patients with great deafness, great loss of bone-conduction, etc., should not be sent away till the test by trial has been gone through with.

6. Simple inflation failing, the greatest attention should be given to the naso-pharynx, even though it is in an apparently fair condition.

7. Syringing, douching, and swabbing the naso-pharynx should be abandoned.

The Relations between Chronic Catarrhal Otitis Media and Chronic Rhinitis. By CHARLES H. BURNETT, M.D., Philadelphia.

The following is an abstract of Dr. Burnett's remarks:

There is a constant causal relation between chronic catarrh of the middle ear and chronic rhinitis and rhino-pharyngitis. The latter is chiefly of the hypertrophic form.

The appearances of the membrana tympani in the first class are so diversified as to preclude a predication of the state of the middle ear and hearing from them alone. In the atrophic class, the symptoms presented by the membrana tympani are more uniform, and the surgeon is able to predicate from them more precisely concerning the aural disease. On the whole, however, the appearances of the drum, taken by themselves, cannot aid greatly in the diagnosis of chronic aural catarrh.

Tinnitus aurium, as a rule, is more marked in the atrophic class than in the hypertrophic. There is also a greater patency of the Eustachian tube in the atrophic forms of aural disease than in the hypertrophic, though it is found in both forms of naso-aural disease. It is most relieved by treatment of the nares and naso-pharynx.

The treatment in the first class consists in cleansing and the use of astringent sprays, with applications of preparations of iodine never stronger than half-and-half. Nitrate of silver is not to be used at all in hypertrophic rhinitis. In the atrophic form, the treatment is the application of stimulant sprays, preferably nitrate of silver, not stronger than four grains to the ounce of water.

A word of caution is given in regard to the use of the galvano-cautery in the nares, since it, like the nasal douche, may lead to inflammation in the naso-pharynx and middle ear.

DISCUSSION.

Dr. Agnew, New York, thought that it was impossible to apply salves to the whole of the diseased surface. He had used the nasal syringe for twenty years, and was not prepared to accept the law that it should be abandoned.

While willing to agree with the views of Dr. Burnett, he thought that more stress should have been laid on the importance of hygiene, which is the most important element in the treatment.

Dr. Roosa thought that the main point in the majority of these cases was proper hygiene. Where there is diminished bone-conduction, he thought it unnecessary to go on and treat that patient.

Dr. Seely said that he had had more satisfaction from the use of ointments than from any other treatment.

Afternoon Session.—Dr. Sexton presented a conversation-tube for the aural instruction of deaf-mutes. By means of this tube the patient was able to hear his own voice and compare it with the voice of his teacher.

Dr. Graham Bell was then introduced, and called the attention of the Society to the great number of children who are classed in institutions as deaf-mutes, but who, under proper treatment and education, could be made simply hard-hearing members of society.

He also referred to the importance of otologists formulating a list of causes of deafness to facilitate the proper registration in institutions for this class of individuals.

A Case of Fatal Ear-Disease beginning as a Circumscribed Inflammation of the External Auditory Canal. By CHARLES J. KIPP, M.D., Newark, New Jersey.

The patient, a married woman, aged 28 years, was first seen nine months before her

death. Since the previous confinement, which occurred four months before coming under observation, she had suffered occasionally with severe pain in and about the left ear. There was swelling and redness of the posterior upper wall of the external canal. There was no perforation and no otorrhœa. Under the use of leeches, instillations of morphia, and inflation of the middle ear, there was decided improvement in the course of a month, when she passed from under observation.

Eight or nine months later, great inflammation of the external meatus appeared, the tympanum and middle ear not being affected. There was no evidence of mastoid disease. Severe headache appeared and continued. The patient gradually failed, and at last died, without any return of ear-disease.

At the autopsy there was found evidence of intense inflammation over the entire extent of the arachnoid and pia mater. There was a collection of pus immediately over the posterior surface of the petrous portion of the temporal bone. Pus was also found on the pons Varolii. A small abscess was found in the anterior part of the left lobe of the cerebellum, near its junction with the pons. The mastoid cells were filled with pus. There was only a thin exudation in the middle ear.

DISCUSSION.

Dr. Burnett reported a case similar in many respects to that of Dr. Kipp, in which the patient died from what was diagnosticated as cerebral abscess, but no autopsy could be obtained.

Dr. E. E. Holt, of Portland, Maine, reported the present condition of a patient from whom teratoid tumors were removed two years ago.

The Local Use of Cocaine and Brucine in Diseases of the Ear. By Dr. C. H. Burnett, Philadelphia.

Dr. Burnett had tried both, in painful affections of the ear, to produce anæsthesia. The speaker had found that neither the sulphate nor the hydrochlorate of cocaine was efficient when the pain of aural diseases was due to inflammation in dense tissues of the external auditory canal, as in furuncle of this part, or when acute inflammation occurred in chronically-thickened periosteal and mucous tissues in the tympanic cavity. The hydrochlorate of cocaine (four-per-cent. solution), however, is efficient to induce local anæsthesia in cases of not excessive congestion of the skin of the fundus of the auditory canal, and in the membrana flaccida of the drum-membrane, as is observed in acute coryza, and attended with pain of a not continuous or intense variety. But solutions of cocaine are not competent to produce local anæsthesia in the external auditory canal profound enough to permit painless incision into it.

The speaker had also employed a five-per-cent. solution of brucine with decided benefit.

Does Cocaine Hydrochlorate, while Relieving the Pain in Acute Otitis Media, prolong the Congestion? By Dr. E. E. Holt, Portland.

The author was satisfied that while cocaine relieves the pain and for the time holds the inflammation in check, yet after the effect of the remedy passes off the inflammation goes on unaffected.

Dr. Theobald had found that in the nasal passages the drug exerted a similar effect,—that although it at first relieved congestion, yet the congestion returned, and was even greater.

Dr. J. O. Green had come to a similar conclusion.

On the Desirability of Adopting a Uniform Method of Expressing the Results of Testing the Acuteness of Hearing. By Dr. H. Knapp, New York.

After referring to the various methods which had been recommended, the following nomenclature was suggested:

H. $= \frac{24}{24''}$ Normal audition for watch.

V. $= \frac{20}{20'}$ Normal hearing for whispered voice.

V. $= \frac{20}{60}$ Normal for conversational speech.

V. $= \frac{20'}{oo}$ { Whisper or speech heard but not understood,—*i.e.*, qualitative perception of sound.

V. $= 60' = o =$ Voice not heard at all. H = O, complete deafness for all sounds.

H. $= \frac{C}{24''}$ { A watch of 24″ hearing-distance is heard in contact.

H. $= \frac{Pr}{24''}$ { A watch of 24″ hearing-distance is heard when pressed on ear.

H. $= \frac{M}{24''}$ { A watch of 24″ hearing-distance is heard when applied to mastoid.

H. $= \frac{T}{24''}$ { A watch of 24″ hearing-distance is heard when applied to temple.

H. $= \frac{D}{24''}$ { A watch of 24″ hearing-distance is heard when applied to teeth.

H. $= \frac{Gl}{24''}$ { A watch of 24″ hearing-distance is heard when applied to forehead (glabella).

H. $= \frac{V}{24''}$ { A watch of 24″ hearing-distance is heard when applied to vertex.

H. $= \frac{Ub}{24''}$ { A watch of 24″ hearing-distance is heard everywhere (ubique).

To indicate that the watch is not heard at the places indicated, the following are used:

h. $= \frac{C}{24''} = o$, h. $= \frac{M}{24''}$ o, etc., means that the watch is not heard in contact, over mastoid, etc.

h. $= \frac{Ub}{24''} = o$ means that bone-conduction for the watch is lost.

Presbykousis. By Dr. B. St. John Roosa.

The doctor applied this term to the failure of hearing which is incident to old age and which is not dependent upon inflammatory affections. It comes on after the age of forty or fifty years. Such persons hear badly in a noisy room. They hear the watch badly, but in a quiet room they can hear quite well. This is characteristic of this affection. In inflammatory troubles with the ear, the person often can hear pretty well in a noise,

while in a quiet room he hears badly. These three symptoms go together: diminished bone-conduction, hearing worse in a noise, and the disproportion between the ability to hear the voice and the watch.

The conditions on which this presbykousis are dependent have not been determined, for as yet there have been no opportunities for post-mortem examinations.

Dr. Sexton exhibited a glass ear-syringe and an ear-forceps with several attachments.

Dr. E. Dyer, of Newport, Rhode Island, reported a case of fistule of the helix in a girl of 14 which he greatly benefited by the application of the galvano-cautery.

The following papers were read by title: "A Case of Chronic Otitis Media Suppurativa resulting in Cerebellar Abscess, with the Autopsy," by O. D. Pomeroy, New York; "Otitis Media Suppurativa, Mastoid Disease, Pyæmia, Mastoid Operation, Recovery," by Dr. C. Bacon, New York.

The following officers were elected for the ensuing year:

President.—Dr. J. S. Prout.

Vice-President.—Dr. S. S. Sexton.

Secretary and Treasurer.—Dr. J. J. B. Vermyne, New Bedford, Massachusetts.

Publication Committee. — Drs. Vermyne, Blake, and J. O. Green.

Committee on Membership.—Drs. Carmalt, Kipp, and Theobald.

Dr. F. L. Capron, of Providence, Rhode Island, was elected to membership.

The next annual meeting will be held at the same place and time as that of the American Ophthalmological Society.

GLEANINGS FROM EXCHANGES.

THE CHOLERIGENIC MICRO-ORGANISM OF FERRAN.—The Royal Academy of Medicine and Surgery of Barcelona has published a report on the memorial presented by Dr. Ferran to the municipality (*El Siglo Médico*, April 26, 1885). They arrive at the following conclusions. 1. The micro-organism described by Finkler and Prior as found in sporadic cholera is not the same found by Koch in Asiatic cholera. 2. The comma-bacillus of Koch only represents one phase of a micro-organism whose morphological evolution is complex. 3. The comma-bacillus of Ferran, obtained in Marseilles and cultivated in Tortosa and Barcelona, is identical in all respects with that of Koch, as is also the bacillus described by Van Ermengen. 4. The elaborate and conscientious studies of Ferran, confirmed by the commission, prove without doubt that this parasite includes the following phases: spiral filamentous thallus, appearance of spores in the thallus, their escape, growth, increasing heterogeneity of their contents, conversion into a mulberry-shaped body, escape of protoplasm, its condensation and formation of a spiral, which is the thallus of new vegetations. 5. In certain phases of the cultivation, so-called oögonia and oöspheres constantly appear. The part played by these demands further study, as do other less constant forms. 6. The injections of the cultivation-liquids cause a marked pathological action, frequently and even rapidly fatal; and, since this results from the inoculation of cholera-products, and from the phenomena observed during life and after death, its analogy with cholera morbus must be admitted. 7. In this infection, obtained by hypodermic injection, the gastro-intestinal disturbances and the symptoms due to them are naturally absent, while it presents the characteristics of rapid infection, with marked algidity, convulsive movements, apparently painful, and cyanosis, in guinea-pigs. 8. In the blood is noticed a constant micro-globulism, varying with the dose injected; it also contains cocci and disks of various sizes. This blood reproduces in broth and nutritive gelatin, either in tubes or in plates, all the forms characterizing the micro-organism; and these are again transmissible. 9. In man all the phenomena determined by hypodermic injection occur, but, as only smaller quantities of the virus can be injected, the symptoms are milder. 10. These facts have been in great part corroborated by Van Ermengen. 11. The facts described bring scientific conviction that the micro-organism producing cholera has been discovered and described. 12. The classification of the parasite is not yet possible to determine; more studies of the forms occurring in cultivations are necessary. 13. When the dose is diminished, or if the energy of the cultivation be attenuated by time or by the action of oxygen, injections in guinea-pigs cause slight disturbance, and leave them protected from the effects of larger doses and of more virulent cultivations. 14. In man, this protection is as evident as in animals. 15. These deductions lead to the hope that the means of avoiding cholera have really been found; but this cannot be affirmed without the test of an epidemic. 16. Various substances markedly poisonous to man do not impede the evolution of the microbe, and calabarin even greatly favors it.—*London Med. Record.* [Compare with the following, and with the Paris Correspondence.—ED. *P. M. T.*]

HUTCHESON ON CHOLERA.—Surgeon-Major Hutcheson, M.D., in a recently-published pamphlet entitled "Cholera, its Cause and Mode of Dissemination," states that cholera is but another name for an active vital organism which develops with fearful rapidity wherever, in ignorance and neglect of sanitary law, man has under certain circumstances reared his abode. There are two widely-different suppositions regarding the development of the cholera-germ. 1. That it is eminently contagious, and is propagated from

man to man. 2. That the cholera-germ is a zymogenic organism, and, like the ordinary septic germ, is air-borne, and differs only in the fact that it (the cholera-germ) has limits to its distribution under certain meteorological and other conditions which apply to most ferments. The English school do not agree with Dr. Koch in believing that cholera is a contagious disease and propagated from man to man. It is now accepted by Dr. George Buchanan and the best medical authorities in England that cholera is not contagious in the sense that it passes from person to person. Some, however, are in favor of the view that cholera is propagated by means of the discharges of the sick, whereas the view held by an intelligent minority denies the contagiousness of cholera, whether direct or indirect. It is certain that attendants on cholera cases suffer no more than others, and the author gives statistics in support of this fact; he then goes on to state that cholera obeys clearly-established and well-defined laws in its rise and dissemination, and declines and disappears in such a definite manner that no amount of acute reasoning can fix any relation between cholera and any directly contagious or seemingly contagious disease. Typical invading cholera has a period of incubation, and it takes from three to five days to produce a distinct epidemic manifestation, while fourteen days mark the limit of an advance of a typical epidemic. From statistics it is shown that in an epidemic the maximum death-rate is reached on or about the tenth day after the occurrence of the first deaths.

The following conclusions are drawn by the author regarding the etiology of the disease. 1. The diffusion of the reproductive elements of a micro-zymogenic organism is the cause of cholera. 2. Like an impalpable poison or miasm, the micro-organism is disseminated far and wide at maturity, under aerial and other influences and agencies. 3. The conditions under which the organism exists and is revitalized are external to man. 4. The cholera micro-organism is engendered in unsanitary conditions of soil, atmosphere, and human existence. 5. The micro-organism acts as a direct poison on the human organism, just as septic germs act on and destroy vital tissues by first interfering with vital function, then ultimately annihilating and destroying all vital activity. 6. Dr. Koch's bacillus is not the cause of cholera, but may be a concomitant of the cholera-organism in being generated in the special organic products of the disease. The history of cholera epidemics in India and elsewhere contains no proof that the disease has a tendency or marked predilection for, and wears out its virulence among, a people. It is certain, however, that it has a predilection for all places where unsanitary conditions exist, though the onward movement of an invading matured cholera-virus is usually in a definite direction, irrespective of such conditions; and this involves a theory of its dissemination chiefly by aerial influences. There is no other known medium more likely to favor the distribution of germs than a dense cloud of aqueous vapor in a warm latitude. The history of the distribution of cholera in India is in many respects in accord with the meteorological record of the monsoon and other natural influences, which prevail with a marked periodicity over the entire country. The author concludes by stating that the cholera-germ can be deprived of its lethal power, before it gains a firm hold on the human constitution, by the administration of a weak mineral acid, and the best remedy to check choleraic diarrhœa is dilute sulphuric acid.—*London Medical Record.*

MISCELLANY.

The State Board of Health of Pennsylvania has been organized by the election of Dr. Germer, of Erie, as President, and Dr. Benjamin Lee, of Philadelphia, as Secretary, and has entered actively upon its work.

At the first meeting, at Harrisburg, July 2 and 3, immediately after the organization of the Board was completed, the following resolutions were unanimously adopted:

"*Resolved*, That the State Board of Health desires to express its hearty approbation of the energetic measures now being prosecuted by the health authorities of the cities of Philadelphia, Pittsburg, and Erie, in order to avert the threatened invasion of Asiatic cholera during the present summer.

"*Resolved*, That in house-to-house inspection faithfully and fearlessly performed it recognizes the only reliable means for discovering the actual sanitary condition of a city; and that the appointment in the city of Philadelphia of an officer who shall devote his entire time to the work of disinfecting such premises as are reported by the inspectors to be a source of danger to the public health affords reasonable ground for the hope that, with proper pecuniary support from the City Councils, these efforts will there be crowned with success.

"*Resolved*, That the State Board of Health regrets the suspension of the order of the Board of Health of Philadelphia directing the disuse and filling up of wells of drinking-water in built-up parts of the city, believing that all such wells, if not already polluted, must shortly become so, thus constituting a constant source and menace of disease.

"*Resolved*, That this Board pledges to the Boards of Health, Health Commissioners, and Health Officers of the cities aforesaid its vigorous co-operation in all action designed to avert pestilence from and maintain a high standard of public health in the ports of entry of this commonwealth, and will unhesitat-

ingly use for this purpose the powers which the Legislature has conferred upon it, and will also avail itself of such advantages as may accrue from its relation to the National Board of Health and the Boards of Health of neighboring States, to the same end.

"*Resolved*, That in view of the lateness of the season and the threatening character of the intelligence from the south of Europe in regard to the progress of Asiatic cholera, the Boards of Health or Health Officers of the aforesaid cities be requested to send at once to the Secretary of this Board copies of their regular reports, together with such other information as in their judgment it may be important that this Board should be in possession of, without waiting for the preparation of blanks by this Board."

The Board of Health of Philadelphia, by special resolution, has called the attention of the State Board to the subject of the pollution of rivers in our commonwealth, and especially to the Schuylkill River as the source of supply for this city.

MALTINE.—In the treatment of digestive disorders, which are common at this time of the year in adults as well as in children, the problem of feeding is often a difficult one to solve. Various forms of concentrated foods are now available, and form an important addition to treatment. The profession now generally recognizes the especial value in deficient or disordered assimilation of malt-extracts, in the manufacture of which important improvements have been recently made. At the Health Exhibition in London the combination of malted barley, wheat, and oats prepared by the Maltine Manufacturing Company of New York was especially distinguished by receiving the award of a gold medal.

Prof. Charles R. C. Tichborne (*Midland Medical Journal*), after an examination of the principal unfermented extracts of malt, finds that maltine is the richest in two of the most important ingredients in these foods,—namely, the phosphates, or bone-formers, and that peculiar farinaceous digestive agent called diastase. Maltine may be said to consist of about eighty per cent. of pure food in its most concentrated and assimilable form. This eighty per cent. may be divided as follows: five and a half per cent. of flesh-formers; seven per cent. of heat-givers; two per cent. of bone-formers; add to this the diastase, which imparts to it the curious power of digesting all farinaceous food outside itself, and we have in maltine a most valuable adjunct to our invalid diet. In respect to the diastase maltine seems remarkably energetic, and at the temperature of the human body one part liquefied "twenty parts of starch in two minutes," and had completely changed or digested that body in about an hour. Maltine possesses all the characteristics of a cereal extract as prepared from the grain, and there can be no question about the genuineness of this preparation. It is only necessary to consult any work upon dietetics to see that there is considerable difference in the composition of the various grain crops. By combining these three important substances—barley, oats, and wheat—a food is obtained which represents the average composition of the three cereals, and that food already digested for use, a condition of immense value to the physician in those special cases where the digestive functions are impaired.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 4, 1885, TO JULY 18, 1885.

LIEUTENANT-COLONEL E. P. VOLLUM, SURGEON.—To be relieved from duty in the Department of the East, on the expiration of his present leave of absence, and to report to commanding general, Department of the Platte, for assignment to duty as attending surgeon at the headquarters of that department. S. O. 159, A. G. O., July 14, 1885.

MAJOR J. V. D. MIDDLETON, SURGEON.—Leave of absence extended fifteen days. S. O. 159, A. G. O., July 14, 1885.

MAJOR J. M. BROWN, SURGEON, CAPTAIN CLARENCE EWER, ASSISTANT-SURGEON, CAPTAIN A. W. TAYLOR, ASSISTANT-SURGEON, and FIRST-LIEUTENANT W. C. BORDEN.—Ordered to prepare for field-service. S. O. 64, Department of the Platte, July 9, 1885.

CAPTAIN VALERY HAVARD, ASSISTANT-SURGEON.—Assigned to duty at Fort Wadsworth, New York Harbor.

FIRST-LIEUTENANT M. C. WYETH, ASSISTANT-SURGEON.—Assigned to duty at Fort Wayne, Michigan. S. O. 140, Department of the East, July 2, 1885.

CAPTAIN W. W. GRAY, ASSISTANT-SURGEON.—Relieved from duty at Fort Barrancas, Florida, and ordered for duty at Fort Columbus, New York Harbor. S. O. 147, Department of the East, July 13, 1885.

CAPTAIN JUNIUS L. POWELL, ASSISTANT-SURGEON.—Ordered from Department of the East to Department of the Missouri.

FIRST-LIEUTENANT HENRY P. BIRMINGHAM, ASSISTANT-SURGEON.—Ordered from Department of the Missouri to Department of the East. S. O. 155, A. G. O., July 9, 1885.

FIRST-LIEUTENANT EDWARD EVERTS, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort McDermit, Nevada.

FIRST-LIEUTENANT A. S. POLHEMUS, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Benicia Barracks, California.

CAPTAIN C. K. WINNE, ASSISTANT-SURGEON.—Ordered for duty at Benicia Barracks, California. S. O. 68, Department of California, July 11, 1885.

FIRST-LIEUTENANTS G. L. EDIE AND C. S. BLACK, ASSISTANT-SURGEONS.—Ordered for duty with troops *en route* to Department of the Missouri. S. O. 78, Department of Texas, July 10, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM JULY 4, 1885, TO JULY 18, 1885.

OWENS, THOMAS, ASSISTANT-SURGEON.—Granted sick-leave for one month, July 14, 1885.

BYRNES, J. C., PASSED ASSISTANT-SURGEON.—Detached from the "Powhatan" for duty at Navy Yard, Norfolk, Virginia.

CORDEIRO, F. J. B., ASSISTANT-SURGEON.—To the "Powhatan," as relief of Passed Assistant-Surgeon Byrnes.

CURTIS, L. W., ASSISTANT-SURGEON.—To Philadelphia for examination preliminary to promotion.

DRENNAN, M. C., SURGEON.—Placed on waiting orders.

FITZSIMMONS, P., SURGEON.—Duty on receiving-ship "Franklin," Norfork Navy Yard, continued until July 1, 1886.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, AUGUST 8, 1885.

ORIGINAL LECTURES.

ANÆSTHETICS IN LABOR.

BY E. L. PARTRIDGE, M.D.,

Late Professor of Obstetrics in the New York Post-Graduate Medical School and Hospital.

GENTLEMEN,—Thus far in the course, while speaking of obstetric operations, we have had frequent occasion at least to allude to the use of anæsthetics in labor, and I think it will be proper now to discuss the subject more fully. I think it wise to do so not only because of the general importance of the subject, but because also it is little considered in lectures during an undergraduate course, and the only practical knowledge gained concerning it is that which the student is enabled to pick up incidentally during his attendance upon clinics. I am frequently asked my views regarding the use of anæsthetics in labor, and particularly are questions put to me as to the danger of fatal issue during the administration of chloroform.

The history of the introduction of anæsthetics is of comparatively little practical importance to us in this connection. It is sufficient to say that chloroform and ether began to be used about the same time,—ether being more particularly the agent at first employed in this country: this fact, I think, explaining in part why English writers, teachers, and practitioners have only slowly taken up the use of ether. Ether is an American idea, while chloroform was a British idea, and English surgeons have been, therefore, stanch adherents to the use of chloroform. I think we are entirely without prejudice in our feelings concerning the value of these two anæsthetics; but this cannot be said of the English, for they are conservative and believe in things British. So you will find, in reading an English text-book, that when an anæsthetic is mentioned it is apt to be chloroform, for chloroform is used extensively in surgical practice in that country. In this country, on the contrary,—certainly in the cities,—it is the exception to employ chloroform in surgery.

First of all come the questions as to whether or not we shall use any anæsthetic in labor; and, if we are to use one, under what circumstances. I believe in the use of anæsthetics in labor, for a number of reasons which I shall mention. An anæsthetic should be used almost invariably where an operation is to be performed, and it may be used with propriety in a great many natural labors, or labors in which no operation is performed. In the latter class of cases it is used to relieve pain, and also, oftentimes, to shorten labor.

Regarding the use of an anæsthetic when no operation is about to be performed, I would say that it should be used during the second stage, and not during the first. I would never use an anæsthetic during the first stage of labor, because the period of dilatation is generally a long one, and if you once begin the employment of an anæsthetic your patient will be unwilling that you discontinue its use. The only exception to this rule would be that of so-called forced labor, or labor hurried in the first stage, perhaps by Barnes's dilator or other means. Under these circumstances I might use an anæsthetic.

I should also prefer to avoid the use of an anæsthetic in the early part of the second stage, because it does modify to some degree uterine action. You will find that under an anæsthetic labor-pains occur a little less frequently and with a little less degree of force than without. Therefore I prefer to delay its use somewhat, waiting, if possible, until we get on into the second stage of labor. It may be necessary to employ an anæsthetic in order to enable the woman, who is suffering much pain, to remain quiet during the manipulations of the obstetrician in procedures which may be necessary for her welfare. I would wait for the suggestion of the patient before employing an anæsthetic to relieve pain. If it be not suggested, and I have no particular reason for using it, I should never urge its use. When, however, the patient is suffering severe pain, and will permit the administration of an anæsthetic, you will find that by complying with her wish you will save her nervous system a great amount of wear and tear. It is not necessary to produce full anæsthesia in order to lessen the patient's sufferings. It is only as the child is about to be born that I carry anæsthesia to the extent of rendering the mother unconscious. At this time it is important to guard against her making a sudden movement which

may interfere with my efforts to protect the perineum. If the patient be phlegmatic, one who has herself well under control and can avoid becoming excited and restless, I should not employ chloroform in normal labor. On the other hand, in women who are under great agitation and excitement in labor, we see pains which have been irregular, short, and inefficient, become steady and strong when an anæsthetic is used.

Regarding anæsthetics during obstetric operations, such as version, the use of the forceps, etc., I think they should always be employed. Their use is desirable because it saves the patient pain. It saves her undue excitement, which would attend any operation, and keeps her quiet at a time when it is necessary to exercise care not to injure any of the uterine structures, as in version, or any of the structures of other portions of the parturient tract, as in forceps-delivery. Besides, the operator is able to discharge his duties best when he knows that his patient is not suffering pain. When a physician knows that every movement which he makes during an operation causes his patient pain, he feels embarrassed by that knowledge, and may be induced to hurry at a time when haste is detrimental to the interests of his patient. I would, then, use an anæsthetic in almost all obstetric operations. I am free to admit, however, that in a few instances, where the head was in the sacral excavation, and the patient known, by experience in previous confinements, to have self-control and to repose entire confidence in me, I have delivered with the forceps without anæsthesia. But this experience does not repeat itself oftener than once or twice a year. In the operation of version I always use an anæsthetic, except in those rare cases of placenta prævia where every moment is of value and delay is dangerous. In cases of version it is particularly important that the uterine wall be not injured, as it might be, even to the degree of rupture, by one's knuckles coming in contact with the contracting walls if an anæsthetic be not used. In other operations, like abdominal section, an anæsthetic is of course necessary, and I do not need to discuss the question in connection with such operations, which are properly surgical as well as obstetrical, and in which we would naturally expect to employ an anæsthetic.

I know you will meet with physicians, and good physicians, too, who advise against anæsthetics in labor, claiming that they are unnecessary and exert a deleterious effect. It may be of interest to mention some of the objections to their use which have been brought forward, for you will be confronted with them from time to time, and it will be well to have given them some consideration.

The early objection that their use is immoral and unchristian may be mentioned only as a curiosity. When anæsthetics were first introduced it was preached from the pulpit, and held by some physicians, that their use in labor was improper because it was contrary to Bible-teaching that woman should be free from pain during labor. Another objection which has been raised is that the mother, being rendered unconscious at the time of the birth of her child, is improperly deprived of experiencing what has been considered the greatest joy of her life,—namely, the consciousness of another human being born into the world through her instrumentality. Such a sentimental objection cannot now be offered in seriousness. Another objection which has been offered is that, the patient under an anæsthetic being without sensation, an operation may be done in a bungling manner without her being able to give warning of the pain and injury which would be produced. It is true that if you were, for instance, introducing the forceps not inside but outside of the cervix, the patient, if she were not anæsthetized, would tell you that she was suffering pain; but in advising the use of anæsthetics in these cases the presumption of course is that the operator has average skill, and in that case there need be no danger of his doing violence. This objection was entitled to more respect when anæsthetics were first introduced, because then less was known about their influence than is known at present. Indeed, experience has taught us that accidents are less likely to occur in operations during labor when anæsthetics are used than when they are not employed.

Again, it has been claimed that puerperal fever, inflammations, and post-partum hemorrhage are more liable to occur when anæsthetics have been used; but I do not believe that the liability to the first of these accidents can be increased unless violence be used during the operation. I can conceive that post-

partum hemorrhage would be a little more apt to occur after their use, and the increased liability to this accident should be recognized and guarded against by proper precautions. When these precautions are taken, and the patient well cared for, it will be avoided. I also believe that subinvolution and chronic uterine disease may possibly be a little more likely to occur after the use of an anæsthetic, and for the same reason,—namely, that the uterus does not contract quite as well; and if the attendant be careless and do not bestow proper attention, the cavity may contain a clot for a number of days after labor, and the organ remain soft and flabby, and fail to undergo proper involution when the patient gets up and walks about. But certainly we are not enough more liable to have puerperal disorders after the use of anæsthetics than when they are not employed to warrant us in withholding them, particularly as a little extra care will avert them. We are told that parturition is a physiological process, and that we ought not to interfere with a physiological process. So is urination a physiological process, but when a man cannot urinate we do not hesitate to employ the catheter; nor should we hesitate to give a woman in labor an anæsthetic when the circumstances call for it.

Regarding the kind of anæsthetic to be used, we have to choose between ether and chloroform. It is not worth while to take up the question of the value of other anæsthetics in labor. Nitrous oxide is of no value here, yet I may stop to say a few words concerning cocaine, which has been suggested as an agent for diminishing pain in labor. I have had it employed somewhat at the Nursery and Child's Hospital by the resident physicians, and they have failed to observe that it perceptibly lessened the pain of labor. They painted the cocaine liberally over the cervix, and injected it into the cervical tissues. Such has been my experience with the drug, and, theoretically, I cannot conceive how it can possibly do any good. You will remember that dilatation of the cervix is under the control of nerve-filaments coming from the sympathetic system. These filaments communicate with certain cerebro-spinal nerves, particularly those of the ilio-inguinal and the ilio-hypogastric plexuses. With each contraction of the uterus there is, as it were, telegraphically transmitted a power which produces pain in these nerves. Now, the pain is not in the cervix at all. You may do what you like with the cervix,—scratch it, cut it with a knife,—and you excite scarcely any pain at all, unless the irritation is of a character to cause a disturbance of the connecting cerebro-spinal nerves. If you wished to produce any effect with cocaine during labor, you would have to apply it to the ilio-inguinal and ilio-hypogastric nerves. It would seem that those who have advocated the use of cocaine to control the pain of labor have done so prematurely, and without sufficient consideration as to the probable way in which it must act.

Coming back to the question of the relative value of ether and chloroform, I may first say that I usually employ chloroform, and expect to continue to do so for certain reasons which I will now mention. I may also say that in surgical practice I would never use chloroform, and I should have no sympathy with a physician who, being in the habit of using chloroform in general surgery, should lose a patient from this anæsthetic.

In obstetric practice, however, I regard chloroform as the proper anæsthetic to be used; but it is important to remember that its use is attended with a certain degree of danger. Women have died during labor from the effects of chloroform; but in almost all such cases it has been carelessly administered.

I know of no remedy, regarded of great value in medicine, which is not capable of doing harm if used improperly. We meet with patients who have peculiar susceptibilities or idiosyncrasies, and, if a remedy is administered to them without proper precautions, some accident may arise. There have been cases of death from opium where patients were peculiarly susceptible to its influence, but certainly we would not be willing to give up entirely the use of opium for this reason.

There is a difference between the condition of the patient who is about to undergo a surgical operation demanding an anæsthetic and that of a woman in labor to whom it is proposed to administer chloroform. In obstetric practice your patient has been suffering from severe pain, which has probably continued for a considerable length of time; and, when the use of an anæsthetic is suggested, your patient, instead of being rendered apprehensive, is

eager to have it used. Where severe pain has existed for some time, the nervous system becomes unusually tolerant of anodynes. This is illustrated in peritonitis, in which condition a person is able to bear enormous doses of opium, such doses as would cause death in a state of health. Now, in surgical practice, where we have previously existing a moderate degree of pain or no pain, the patient looks upon the operation with apprehension, he comes to the operating-table blanched, his nervous system is in a state of depression rather than of excitement, and it is less tolerant of the influence of the anæsthetic.

Then there is another important difference regarding the degree of anæsthesia required in general surgery and in obstetric practice. In the former it is necessary to carry the anæsthesia to the third stage, or the stage of complete muscular relaxation and unconsciousness, while in the latter it should be carried only to the second stage, in which the patient is unconscious of what is being done, but whose muscular system is not entirely paralyzed and the uterus still continues its contractions. As I have said, in surgery the patient must always, except in very short operations, be anæsthetized to a profound degree, while in obstetric practice anæsthesia should never be carried beyond the second degree, and when your patient is not kept within this limit you will be exposing her to an unnecessary and dangerous risk. Almost invariably in cases in which an accident has attended the use of chloroform in labor it has been due to too profound anæsthesia. I have never met with a case of death from chloroform, but on one occasion was summoned to a case in which it was thought that death had taken place from the anæsthetic. It was clearly a case in which anæsthesia had been carried to the last stage, and the patient had been snoring deeply for some time, the tongue having dropped back into the pharynx, and all the muscles being completely paralyzed. Letting up the chloroform, the patient could be rallied, fortunately, the uterus again began to contract, and the woman gave birth to her child.

Let us consider some of the advantages to be derived from the use of chloroform as against ether. First, the change from a condition of consciousness to one of unconsciousness is very quick, and during an operation you can, if it be desirable, let up the anæsthetic and consciousness will return; and when it is desired that anæsthesia should again exist, a few moments' reapplication of the agent will bring about unconsciousness. With ether, as you know, the patient must undergo a stage of excitement, becomes incoherent, and talks and thrashes about before coming under the influence of the anæsthetic, and, when once anæsthetized, you cannot permit her to return to consciousness until operative procedure is completed.

A very serious objection to the use of ether in obstetric practice is that it gives off an inflammable vapor, and inasmuch as it is usually employed at night and in a small room, there is danger of explosion. With chloroform there are no such vapors to explode.

As just stated, with ether you cannot vary the grade of anæsthesia as you can do with chloroform, and it requires a much longer time to bring the patient under the influence of the agent. With chloroform very little time is lost in bringing about unconsciousness. From five to ten minutes is required, according to the susceptibility of the patient. Sometimes anæsthesia is produced in even a shorter time than five minutes.

Permit me again to say that there are some well-authenticated cases of death from chloroform during labor. Dr. Turnbull, of Philadelphia, some years ago collected two or three cases, and perhaps more have been added to his list. It is important to know this and bear it in mind, so that you will be led to guard against the danger. If you go out with the feeling that no fatal result ever attended the use of chloroform in obstetric practice, you will be liable sooner or later to be painfully undeceived. You should watch the pulse constantly during the administration of chloroform, as it is the best guide regarding approaching danger; and yet it is not an infallible guide. The rule of greatest value is that which I have already mentioned,—namely, anæsthesia beyond the second degree should be avoided.

Chloroform seldom produces nausea, while ether almost invariably produces it. The administration of ether in labor means a very sick woman twenty-four hours after delivery. The odor of the drug remains in the patient's hair and clothing sometimes for two or three days, and the smell is to the patient a crying

grievance during that time. The odor of chloroform is not very disagreeable, and it remains for only a comparatively short time.

There are certain safeguards against the dangers of chloroform which are worthy of mention. One is the addition to the chloroform of nitrite of amyl. I think it has been positively demonstrated that nitrite of amyl is an antidote to chloroform-poisoning, and it has been suggested that to every ounce of chloroform employed for anæsthetic purposes there be added ten drops of the nitrite of amyl. We have not yet the statistics which would show the positive advantage of this mixture, but I believe it would be proper to give it a trial.

Should chloroform be diluted? It ought to be diluted with *atmospheric air*, but with nothing else. Mixtures of chloroform and ether and of chloroform and alcohol have not given results which make us feel that they are safer than chloroform alone. Chloroform itself is as safe as a mixture of chloroform and ether.

Speaking of the dilution of chloroform with atmospheric air brings us to the subject of the manner of administration. Such a cone as that which is employed in ether-inhalation should never be used in giving chloroform. The chloroform should be put upon a handkerchief laid out straight, and this held by a competent attendant from an inch to an inch and a half away from the nose. It should never be allowed to cover the mouth and nostrils. I always apply it myself until the patient has been rendered unconscious. A method which is sometimes practised, and which is a very good one, is to put a crumpled handkerchief into the bottom of a whiskey glass or small-sized tumbler, and pour the chloroform upon it. The rim of the glass being rigid, it is impossible for it to fit over the nose and mouth so as to exclude all air from the mouth and nostrils. Remember, in whatever way you apply the chloroform to the nostrils, you should always remove it when it is not required, for when it is necessary anæsthesia can be renewed with facility. Never carry it to the point of causing the patient to snore, and if this stage should be reached allow the admission of a greater amount of air.

A few words regarding chloral may be spoken here. This agent can never take the place of chloroform in obstetrics, but it has a sphere of usefulness of its own. I have told you that chloroform should not be used during the first stage of labor, but chloral may be employed with propriety and benefit at this time. Chloral, however, is without value, or is of doubtful value, during the second stage, for it will not overcome the pain; and should you use it you would probably find it necessary to substitute chloroform later, and the two drugs make a dangerous combination. I should not feel that it was as safe to use chloroform upon a patient who was already pretty well under the influence of chloral as upon a patient who had not received the latter drug. The latter drug, when used to modify the pain of the first stage of labor, may be administered by giving fifteen grains every half-hour until three or four doses have been taken. Under the influence of chloral, the moment a pain is over the patient will fall asleep, and, while she will be aroused by the next pain, she will not seem to appreciate it so fully as when no narcotic is given. The objection to chloral is that you have to wait for its influence to wear off, and it may thus interfere with the administration of chloroform in the second stage of labor; but where there is a rigid cervix, or the patient is nervous and excitable, you will find that chloral will be of service during the first stage of labor.

There is another objection to chloral which I have not seen mentioned in books, which is that after forty-five or sixty grains have been administered, the patient will be liable to manifest a mild delirium, talking wildly, which excites apprehension on the part of her friends. Inasmuch as you do not expect ordinarily to remain with her during the first stage of labor, you may not be at hand to quiet their fears. To guard against such apprehension it will be well for you to state before giving the drug that it will be likely to have this effect, and thus save the attendants unnecessary alarm.

In giving an anæsthetic in labor, bring the patient under its influence before you make any preparations for the operation, and before changing her position in the bed. Thus you will save her any apprehension she might have if she saw extensive preparations being made for an operation.

Again, it matters not what anæsthetic you may use, never administer it until

you have obtained the consent of some one besides the patient herself,—the nearest relative or friend who may be by at the time. The woman who is suffering the pains of labor would not be considered a competent judge regarding the propriety of using chloroform, and you might be censured if no other permission than hers was obtained. You will not find difficulty in obtaining the consent of her friends where it is necessary to employ an anæsthetic.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF OTOLOGY.

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ON THE NECESSITY OF PROVIDING FOR THE BETTER EDUCATION OF CHILDREN WITH DEFECTIVE HEARING, IN THE PUBLIC SCHOOLS.

(Continued from the Report in No. 450, February 21, 1885, this Journal.)

DR. SAMUEL SEXTON (*New York Medical Record*, December 20, 1884) endeavors to show that there is a considerable number of pupils in Deaf and Dumb Institutions who have been treated as though totally deaf, but who are, in fact, possessed of enough hearing to be available in their education. He states that in the Minnesota Institution "from fifteen to twenty-five per cent. of all pupils received can be taught by the aural method, and that after being instructed for a time many could hear well enough, at the distance of ten or fifteen feet, to converse when elevated voice was used."

We are then informed that confusion and consequent injustice to deaf pupils (not mutes) arise from neglect to classify properly, since all deaf pupils are forced either into the company and classes of totally deaf children or into classes of those with good hearing. Hence some very deaf children are in hearing-schools, while other deaf children (not mutes) are being taught in Deaf and Dumb Institutions, and are taught as deaf-mutes.

The want of proper classification of pupils in Deaf and Dumb Institutions has led to waste of time and money in endeavoring to teach the congenitally deaf, who are inapt, by the oral method, or to speak. The want of success, being misunderstood, has thrown discredit upon the system, and, as it is expensive as compared with instruction by dactylology, the sign-language has been adhered to. It is estimated that ten per cent. of congenital mutes cannot learn to talk unless more attention be given to their instruction in this matter than is practicable in any public school. The mediocrity is further increased by the mental inertness of mutes, who are admitted when too old to adapt themselves successfully to study or retained too long after reaching adolescence.

The duty of the State in respect to the education of the deaf is next considered.

By many it has been held that the public-school system has for its principal object the prevention of illiteracy among the poor, and, if this view be correct, it can scarcely be regarded as consistent, on the part of the advocates of educating the average child, for them to oppose a scheme for the promotion of the interests of a needy but uninfluential class, while fostering expensive institutions for the free education of those who are better off, going so far, even, as to expend large sums of money in giving special instruction in German, French, music, etc.

The expense of educating the deaf in day-schools as compared with their education in institutions is then considered.

It is claimed by Dr. Sexton that the outlay by the State would be lessened probably so far as deaf-mutes are concerned, while, on the other hand, it would be slightly increased for instruction of the very deaf and partially deaf. There need be no expense for new buildings, the structures at present in use for schools being sufficient. At present it costs in some States two hundred and fifty dollars a head to instruct the pupils in the Deaf and Dumb Institutions. If classes of ten are formed in the ordinary public schools for the very deaf, and a teacher for them secured at eight hundred dollars per annum, one hundred and seventy dollars a pupil would be saved.

Teachers are numerous, as demands are increasing for the better instruction of the deaf. Examinations should be made in the public schools, with a view of determining the hearing-power of pupils, as it is important to begin the training of deaf children early.

DEAF-MUTES AND THE PUBLIC SCHOOLS.

Mr. Joseph C. Gordon, professor in the National College for the Deaf, in Wash-

ington (*American Annals of the Deaf and Dumb*, April, 1885), has recently written a very interesting paper on the above topic, and it seems fitting to consider some of his conclusions at this point. He says, "Disappointment and failure have so uniformly followed the attempted extension and adaptation of the common-school system to the needs of deaf children that in Europe all systematic and organized efforts in this direction have been abandoned, and, in general, the education of the deaf has been confided to small groups of associated and trained specialists, forming the nuclei of the hundreds of more or less thoroughly organized and equipped *institutions* which have come into being without preconcert, unsought and unheralded."

Then follow eleven conclusions, only some of which demand attention here,—for example, the fourth. "That theoretical advantages of an environment of hearing persons have never been realized in practice. Children deaf from infancy have so little command of language that they can associate with other children only upon very unequal terms. . . . The greatest benefit realized has been from the limited association encouraged by certain favorably-situated institutions."

The tenth conclusion is worthy of attention,—viz., that day-schools or *externats*, whether special schools beside public schools or entirely separate from them, are not so efficient as the better class of thoroughly organized institutions, many of which have grown out of day-schools.

The eleventh conclusion is "that special institutions remain a necessity for the great mass of deaf children, and they continue to offer superior results, with the greatest economy of time, money, and men; and this is true, regardless of methods, systems, or devices of instruction."

STRUCTURE OF AURAL POLYPI.

Dr. J. B. Weydner, of Munich (*Archives of Otology*, vol. xiv. pp. 49–78, March, 1885), has communicated some very interesting researches into the structure of aural polypi. He justly remarks, at the outset of his article, that the "study of aural growths is of great assistance to us in our investigations into the nature and origin of tumors in general, because in the case of aural polypi we have the most favorable opportunities of examining them in all stages of their growth." These examinations have led the writer to the conclusion that the great majority of aural polypi spring from the soil afforded by a suppurative inflammation of the middle ear in the shape of small round granulations, which possess all of the histological peculiarities of the common type of traumatic granulations, or granulations of a wound. Sometimes, however, they contain large quantities of epithelium. The older the polypus the greater the quantity of connective tissue: yet in the oldest polypi clumps and clusters of nerve-cells may be found. Even when the middle ear is free from suppuration, it can often be demonstrated that the presence of some equally efficient cause, such as a foreign body pressing on the walls of the auditory meatus, or a plug of cerumen of long duration which has been pushed in upon the membrana tympani by the patient himself, has excited the formation of the polypus. Hence Dr. Weydner feels justified in asserting "that almost all aural polypi are originally nothing but granulation-tumors, whose fate it is to be ultimately transformed into connective tissue."

The cause of the polypi was otitis media purulenta acuta in eight cases. Five of these grew from the membrana tympani, two from the meatus, and one from Wilde's incision. None of them originated in the tympanic cavity.

In sixty-one cases the cause of the polypi was chronic purulent otitis media, in ten of which the polypus was located upon Shrapnell's membrane. Of the remaining fifty-one polypi, twenty-five sprang from the tympanic cavity, thirteen from the membrana tympani, and thirteen from the external meatus. Besides these there were four other cases in which polypi in the meatus arose independent of any suppuration, and chiefly, in the opinion of Dr. Weydner, from irritation caused by foreign bodies or plugs of cerumen.

Most of the patients were from twenty to thirty years of age. Ten were less than ten years of age, sixteen between ten and twenty, twenty-one between twenty and thirty, ten between thirty and forty, twelve between forty and sixty, and age unknown in four. Forty-four of the seventy-three patients were males, twenty-seven were females.

Histologically, thirty-three of the polypi were granulation-tumors, five were essentially vascular tumors, and four were epithelial tumors. Among the latter was a

small cholesteatoma, a wart from the tragus, a wart-like growth from the cartilaginous meatus, and, finally, an adenoma. This last tumor was found in a case of chronic otorrhœa, and manifested in a circumscribed space a number of enormously proliferated sebaceous glands.

In forty-six out of seventy-three polypi a tendency to degeneration was marked. In three instances the handle of the malleus was partially or wholly enclosed.

PHYSIOLOGY OF THE SEMICIRCULAR CANALS.

Dr. Benno Baginsky, of Berlin, has again contributed an article on this interesting subject (*Archiv f. Anatomie u. Physiologie*). There are two views held by physiologists concerning the cause of the phenomena induced by experimentation upon the semicircular canals,—viz., first, that they are due to an irritation so great as to produce a paralysis of the vestibular branches of the acoustic nerve, and, secondly, that they are induced simply by an irritation of the branches of this nerve. Baginsky's experiments, conducted with careful attention to and regard for the anatomical relations between this part of the ear and the brain, force him to reject both of the views stated. He maintains that the cause of these phenomena must be sought in the connection between the labyrinth and the subdural cavity, by means of the aqueducts of the cochlea and vestibule, and also in the proximity to the cerebellum. These relations of the parts render easy a lesion of the brain whenever the labyrinth is experimentally invaded, and these cerebral lesions are competent to produce all the phenomena which are known to ensue. Dr. Baginsky feels that he is further corroborated in his views and conclusions by the fact that isolated injuries of the cerebellar tissues near the ear are followed by exactly the same kind of manifestations, and also because late anatomical investigations have shown that the old view of the division of the acusticus into a cochlear and a vestibular branch is incorrect. He therefore thinks the discussion of the subject is narrowed to the question whether the phenomena occurring after section of the semicircular canals are caused by a labyrinth-lesion or by injury to the brain, and especially to the question, What is the nature of the labyrintho-cerebral lesion?

He maintains that it is not a paralysis of the vestibular nerve-branches which causes the vertigo, because there is an absence of all vertiginous symptoms when complete destruction of the labyrinth is effected, and also because complete degeneration of the labyrinth, which can be brought about experimentally on animals, is unaccompanied by any such manifestations of vertigo. In such cases, though complete paralysis of the acoustic nerve must of course be induced, no disturbance in equilibrium is observed.

But what has *mere irritation* of the acoustic branches in the vestibule to do with these phenomena? This, too, cannot explain the vertiginous symptoms, since in the experiments by injection into the labyrinth upon rabbits, notwithstanding intense inflammation of the labyrinth, the cochlea, and the vestibule, as observed post mortem, the vertiginous symptoms observed during the pressure by injections did not persist after the cessation of such pressure, notwithstanding the continuous irritation of the presence of a ten- to fifteen-per-cent. solution of chloride of sodium in the labyrinth.

Baginsky is further strengthened in his opinion by the fact that, whenever the fluids injected into the tympanic cavity produced symptoms of vertigo by pressure, it was found that the injected fluid had found its way into the jugular fossa through the aquæductus cochleæ, and also that many of the animals experimented upon and then allowed to live subsequently died with symptoms of meningitis,—a proof, it is thought, that by the experiment a lesion of the brain must have been produced.

It has been admitted that the symptoms in question could be evoked by irritation of the brain,—*i.e.*, of the cerebellum; but it has also been claimed that the vertiginous symptoms could be produced by injury of the labyrinth alone. Especially, of Högyes (*Pflüger's Archiv*, Bd. xxvi.) essayed to prove this by a new method of investigation. He concluded that the vertiginous phenomena evoked in Baginsky's experiments by pressure in the tympanic cavity, as well as the nystagmus, were due to exhaustion or a gradual paralysis of the membranous labyrinth. He further endeavored to show that there exists a certain relation between the mechanism of the associated bilateral ocular movements and both vestibular portions of the acoustic nerves. In his experiments, Högyes opened the fossa mastoidea (brain-cavity) in the living rabbit; the portion of the brain lying

immediately beneath the opening thus made he pushed carefully farther into the cranial cavity, and from this point bored into the labyrinth and applied various irritants, in consequence of which, in his opinion, by irritating certain parts of the labyrinth, specific and characteristic motions of the eyes, with simultaneous rotatory movements of the head and vertigo, ensued. After destruction of the membranous parts of the labyrinth, subsequent to these experiments, renewed irritation of the wall-surface in the vestibule was not efficient to produce nystagmus and turnings of the head. Finally, after destruction of the membranous labyrinth, when injections were made through the tympanic cavity, according to Baginsky's method, no vertiginous symptoms ensued. To this Dr. Baginsky objects that the Högyes method of experimentation is very fallacious, because, instead of the brain being left intact, and every remote possibility of such lesion being excluded, the cranial cavity has been deliberately opened at a point extremely near the cerebellum. Furthermore, Högyes pushed the portion of brain exposed beneath the point of incision farther into the cerebral cavity, although there was no room for it in the cranial capsule, and it is claimed that such pushing cannot be done without further squeezing and tearing it and injuring neighboring parts. Dr. Baginsky, therefore, endeavored to repeat Högyes's experiments. He states that if the fossa mastoidea in the living rabbit be broken open, the convolution of the brain lying beneath this spot of the cranium is exposed, and that insertion of this part of the brain farther into the cranial cavity is impossible; and also the most careful and skilful operator is not always able to open the vestibule, as very often the cerebral or tympanic cavity is opened by mistake instead. The spot operated upon is so small and so difficult to get one's bearings in as to render it doubtful whether Högyes really is able (as he claims to be) to expose and irritate, at will, the utriculus and the horizontal and vertical ampullæ in the living rabbit. Removal of the portion of brain in the fossa mastoidea above the tegmen tympani is not usually followed by any phenomena. Sometimes, however, in some of the experiments, bilateral nystagmus was manifested at the moment of ablation of the aforesaid portion of the encephalon, but it disappeared quickly. The same phenomenon is sometimes reproducible by pressure on the pedicle of the detached cerebral convolution aforesaid. If the animal, after such an operation, is permitted to get from the table, it runs about with normal actions and movements. Not so if the labyrinth has been opened. Then there ensues a bilateral and intense nystagmus, preceded usually by fixation of the eyes and subsequent convulsive rotations. With the nystagmus, in almost all the cases, there is perceived the Magendie ocular position, —viz., the eye on the side operated upon looks upward and outward, while the eye of the uninjured side looks downward and inward.

This position of the eyes is not constant, however, since sometimes with a nystagmus the axis of the eyes is normal, and sometimes the eye on the uninjured side points upward and outward. The other appearances of the eyes are extremely various. Very often the severe nystagmus disappears gradually, and the eyes return to their normal position and condition. When the animals thus operated on are placed upon the floor the nystagmus usually begins again: also there appear marked oscillations of the head, revolutions about the long axis, and the so-called "watch-hand" rotations of the body, usually towards the side operated on. Often there are revolutions backward. These involuntary motions may cease for a time, and the animals lie upon the ground. Gradually the animals rise, and, if urged to walk, generally fall towards the operated side. A post-mortem examination immediately after death reveals, in most of the cases, macroscopic changes in the cerebellum and vicinity. Hemorrhages are found on its surface, under the dura and pia, and often in the substance of the cerebellum. They may also be found in the peduncles of the brain and upon the vermiform process. In some of the experiments, in which during life the above-named phenomena appeared, macroscopic changes upon the brain-surface were not observed. In all cases, however, in which the phenomena appeared the labyrinth had been broken into before death by the experimentation, and after death was found filled with blood. Besides these successful experiments upon the labyrinth, there were some instances in which, at the post-mortem examination, the labyrinth was found not

to have been opened, but in which, nevertheless, all of the *aforesaid disturbances were exhibited.* In such cases it was found that the gimlet had entered beside the labyrinth, and penetrated the tympanic cavity, and in these cases, at the post-mortem examination, deep lesions and hemorrhages were discovered in the cerebellum. The conclusions drawn from these experiments are that in some cases ablation of the small portion of the brain exposed by the incision of the mastoid fossa in the rabbit produces nystagmus, usually attended with the Magendie ocular movements already described, swingings of the head, axial and so-called watch-hand movements, and backward revolutions of the body. These disturbances did not always correspond to the wounded side, but appeared sometimes in a reversed order. But all of these results by Baginsky are diametrically opposed to the asserted results of Högyes.

The latter maintains that mere breaking into the labyrinth produces *none* of the peculiar alterations in equilibrium.

The question between these two observers still is, Are the phenomena due to lesions of the labyrinth or of the brain? Baginsky holds that a close scrutiny of his experiments indicates a brain-lesion, which can be and has been shown post mortem, but how it comes about must yet be proven. It is held by Baginsky that the Högyes methods of experiment—viz., breaking open the skull (mastoid fossa), removal of the subjacent cerebral lobe, and breaking into the labyrinth—are all sufficient causes for cerebral hemorrhages and compressions, as found post mortem, and which would have been found by Högyes had he searched for them.

Baginsky then abandons the rabbit as unsuitable for these experiments, because the mechanical opening of the labyrinth without wounding the brain is impossible in this animal. He therefore chooses dogs, in which, after opening the bulla ossea (behind the ear and in the neck), the labyrinth is easily reached without wounding the brain. Some experiments of this kind were performed without narcotizing the animals, in order to escape the imputation that the phenomena attributed to irritation of the acoustic branches in the vestibule were really due to narcosis rather than to the operations of the experimenter. Therefore the animals experimented upon were kept only slightly etherized until the bulla ossea was opened. The anæsthetic effects were then allowed to pass off and the animal to recover perfect consciousness. Then when the animal had become active and lively the labyrinth was opened by boring with a gimlet, and the animal placed upon the ground, in order closely to observe any disturbance which might arise in the function of equilibrium. In some cases the animals thus operated upon showed no abnormal symptoms. They ran about, showing no disturbances in the muscles of the eyes nor in their own movements, and yet when these animals were killed, as they were a short time after these experiments, the labyrinth was found to have been opened and to have become filled with blood. On the other hand, in the majority of cases operated on the following symptoms were observed. Immediately upon irruption of the labyrinth an excessive ambilateral nystagmus was observed, the eyes rolling unceasingly about, and there was also at the same time a narrowing of the pupil on the incised side, and in some cases an insensibility of the cornea, and also at times loss of ability to close the upper eyelid. When placed upon the ground or the floor, these same animals fell upon the incised side, and could with difficulty rise. At every endeavor so to do, the most violent vertigo ensued. The involuntary movements consisted in revolutions about the long axis in some cases, and in others in the so-called watch-hand revolutions of the trunk. These usually terminated by falling and lying upon the ground. Each new endeavor to rise and move forward was followed by the renewal of the vertiginous symptoms. Sometimes tough saliva and mucus came from the mouth and nose. Gradually the severe symptoms abated, and in one and a half to two hours after the operation the dogs were able with difficulty to maintain their equilibrium by walking with their legs apart and with occasional falls to the right or left.

Some of the dogs were killed immediately after the operation, but the post-mortem examination revealed no demonstrable changes in the brain. Others were allowed to live: of these some died of the results of the operation a few days later, and at the post-mortem examination profound œdema of the brain and of the ventricles, with hyperæmia of the ventri-

cles, was found. The majority of these animals lived, and in these observation revealed that nearly all the phenomena gradually ceased to appear. First, the nystagmus in the course of twenty-four or thirty-six hours; then the falling tendency, which latter could be re-excited, at most to a very slight extent, however, by short turnings and twistings of the animals. The anæsthesia of the cornea also disappeared. The pose of the head, in some of the animals, did not become normal, as the animals held the head so that the eye on the incised side looked downward and the eye of the untouched side looked upward. Upon killing these animals subsequently, no cerebral lesion could be found; but the labyrinths in such animals, killed somewhat sooner, were found in the highest degree of inflammation. In others, which were killed somewhat later, cicatricial tissue was found in the labyrinth.

A review of the phenomena resulting from operations on the labyrinth of dogs, as in the case of rabbits, shows the greatest variability and interchange of symptoms following the same irritation, or one at least intended to be of the same nature. In one case irruption of the labyrinth produces no disturbance; in another there are produced excessive involuntary symptoms in the management of the eyes and of the muscles of the body, the latter so variable that in the same animal turnings, revolutions about the long axis, and revolutions backwards closely follow one another. In some of these cases there was narrowing of the pupil, and in others insensibility of the cornea.

Dr. Baginsky then asks the question whether the underlying cause in these cases is an isolated irritation of the vestibular branches of the acoustic nerve, or whether other disturbances underlie the phenomena. He admits that an irruption into the labyrinth and the consequent escape of the perilymph can cause an irritation of the vestibular nerves; but by supposing such a cause as competent to produce the phenomena it is not possible to explain the absence of all disturbances in some of the aforesaid experiments, and also the interchangeability of some of the symptoms; and, on the other hand, so far as the anatomical proof of a brain-lesion is demanded in the case of the aforesaid experiments on dogs, it is impossible to adduce it from the post-mortem conditions. A great difficulty arises here, —all the more important since all those authors who seek the cause of the disturbances under consideration in an irritation of the vestibular branches of the acusticus are always referred to the want of an anatomically demonstrable brain-lesion in support of their views. Then, too, the anæsthesia of the cornea in other cases must be explained, since we know that it is referable to a lesion of the trigeminus, and especially to a branch in no way related to the ear. This Dr. Baginsky explains by alterations in the hydrostatic and hydrodynamic relations in the cranial cavity, productive of irritation at the base of the brain, as he can evoke similar phenomena by rapidly revolving dogs on the turning disk. Furthermore, all these phenomena may be produced by rapidly revolving dogs previously rendered deaf in both ears.

The conclusion from these experiments by rapid revolutions, therefore, is that, for the production of vertiginous symptoms the existence of one or of both labyrinths is not necessary, and that they can occur without any anatomically demonstrable cerebral lesion, simply and alone from disturbances in the circulation and changes in the pressure in the cranial space.

If these results be applied to the experiments on the labyrinth already detailed, it is evident that an anatomically demonstrable lesion of the brain is not necessary to produce the vertiginous symptoms under consideration. There is necessary only a disturbance competent to produce an irritation in that portion of the brain from which similar or identical phenomena may be evoked. If the reflex excitation of the brain for any reason should fail to be evoked, then the resultant disturbances are looked for in vain, notwithstanding the artificial opening of the labyrinth, and notwithstanding the irritation of the vestibular branches of the acoustic nerve. The question whether, in these experiments of Baginsky's, the brain is secondarily affected can be answered only in the affirmative, in view of the anatomical relations, the connections between labyrinth and ear, and the common blood-supply. This becomes all the more probable when in a physiological experiment a series of disturbances are observed, like anæsthesia of the cornea, which can only be explained by reference to a lesion of

the trigeminus at the base of the skull. It is altogether another question how these lesions occur. Whether they are induced by sudden reflux of the cerebro-spinal fluid after opening of the labyrinth, or through changes in the circulation, or through frictions of the brain on the base of the skull, with concomitant action of both the first factors, demands further investigation, which Dr. Baginsky proposes to make at some future time.

EXPERIENCE WITH ELECTROLYSIS IN DERMATOLOGICAL PRACTICE.

BY GEORGE H. ROHÉ, M.D.,

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THE introduction of electrolysis into dermatological practice is due to Dr. W. A. Hardaway, of St. Louis, and Dr. H. G. Piffard, of New York, who both began the use of this method about the same time. It was at first employed altogether for the removal of superfluous hairs, but within the last five or six years its use has been much extended. It is now frequently used for the destruction of warts and other small epithelial growths, pigmentary and vascular nævi, small tumors of the sebaceous glands, telangiectases, and similar affections. In this paper I purpose to detail some personal experience with the method.

REMOVAL OF SUPERFLUOUS HAIRS.

Electrolysis has been most frequently used for the permanent removal of superfluous hairs. In addition to the appliances to be presently mentioned, the operator who attempts to treat a case of hirsuties by this method needs a steady hand, clear vision, and above all an abundant stock of patience. Without these three requisites, no one should undertake the treatment of such cases.

The battery used should furnish an evenly-acting current of moderate power. I have used both the Flemming and McIntosh batteries with comfort, and with satisfactory results. For the last two years I have employed the latter exclusively, using a current of from six to twelve cells.

The electrodes consist of one ordinary sponge electrode attached to the positive pole and held in the patient's hand. This is used to make and break the circuit. The electrode attached to the negative pole consists of a fine needle in an insulated handle. The handle I now use is of wood, with a brass rod passing through its centre and small binding screws at each end for the purpose of holding the needle and of fastening the handle to the conducting wire-cord. The handle is made pretty thick, so as to enable it to be held firmly. A very thin ivory handle, which I formerly used, cannot be held as steadily as the thicker one.

The best needle I have used is one made by A. M. Leslie & Co., of St. Louis, for my friend Dr. Hardaway, of that city. It is made of a composition of platinum and iridium, is very fine, smooth, and flexible, and does not break easily. I have tried the finest obtainable steel needles and dentists' and jewellers' "bristles," but with much less satisfaction than the platinum-iridium needle referred to.

A chair with a head-rest—an ordinary dentist's or oculist's chair—is absolutely essential to steady the head of the patient during the operation. For the greater comfort of both operator and patient, a reclining chair which can be fixed at any angle is decidedly better.

To proceed with the operation: The patient is placed before a good light—avoiding direct sunlight unless modified by frosted glass—and directed to take hold of the handle of the sponge electrode, the sponge, of course, having been previously moistened. The operator then sits a little in front of and to the right of the patient, and takes the needle electrode in his right hand, holding a pair of tweezers with flat, narrow jaws in his left. The needle is then gently insinuated into a follicle by the side of the hair until the bottom of the follicle is reached. This is manifested by a slight resistance to the onward passage of the needle. The patient is then directed to touch the sponge with the palm of the other hand, thus closing the circuit. The current will immediately pass and the electrolytic action be made manifest by a little frothing around the needle. In some skins also a little wheal will be raised about the follicle. In from twenty to forty seconds the hair can be extracted with the tweezers without the slightest resistance or pain. If the hair does not come away with perfect ease, the papilla has not been destroyed, and the needle should be per-

mitted to remain and the current to pass a little longer. The current is broken by removing the hand from the sponge electrode. This gives less pain than if the current is closed and opened with the needle.

If the hairs are very close together, they should not all be removed at the same time. The hairs should be picked out here and there; otherwise the points of irritation will be in too close proximity, and, if sufficiently intense, may produce small areas of sloughing and leave scars. If the operation is properly performed, no visible scars should remain.

A sitting may last from fifteen to thirty minutes. Very few operators can extend it beyond the latter time. The sittings may be repeated every other day, or, in cases where time is important, every day. After the operation a lotion containing a drachm of oxide of zinc and two drachms of glycerin in two ounces of rose-water should be applied. It covers the redness of the skin and relieves the irritation, which is sometimes considerable.

The following brief notes are outlines of cases in which I have used the electrolytic method:

Case I.—My first case of hirsuties was in a lady, aged 25, blonde, and a school-teacher by occupation. She was referred to me by my friend Dr. Wilmer Brinton, to whom she had applied for relief. Her chin was covered with a pretty thick growth of stout hairs.

The patient was under treatment about six months, during which time I removed no less than fifteen hundred hairs. In this case I frequently employed a current of twelve to fifteen cells, which I am now convinced was too strong. It not only gives unnecessary pain, but is liable to produce some destruction of the peri-follicular tissues and leave small scars. About one-third of the hairs returned after the first operation. The sittings were repeated at intervals, about thirty operations being required to complete the cure.

Case II.—The second case was a married lady, brunette, 30 years of age. She had a truly formidable beard upon her chin. In addition, she had also a decidedly noticeable growth of hair upon her upper lip. The greater number of hairs were thick and black. These were removed with ease, few of them returning after the first operation. There was, however, quite a large number of long, fine, light-colored hairs, which gave considerable trouble on account of the difficulty of entering the follicle with the needle. This patient has been under treatment nearly two years, and during that time over three thousand hairs have been removed from her face. She still returns about once in every two months, for the purpose of having a few scattering hairs removed.

The destruction of the hairs under the chin in this case was especially difficult, on account of the tortuosity of the follicles, which rendered it almost impossible to reach the papilla with the point of the needle. The flexible needle of platinum and iridium renders the process much easier, however, than it was at first, when I used a steel needle. The skin of this patient is exceedingly sensitive, and a current of eight cells is the extreme limit of strength which can be used with comfort.

Case III.—This was a widow, blonde, aged 37. She had two small tufts of thick hairs growing on the chin. There were about fifty hairs, which were removed at one sitting. About fifteen returned, and were removed at a second sitting. Three months later she returned again with five moderate-sized hairs, which were then destroyed. She has had no return of any growth for upward of a year.

Case IV.—A blonde, aged 20, who had a very profuse growth of fine, light-colored hairs upon the chin and cheeks. The hairs were difficult to remove, and about thirty per cent. have returned. The patient has become discouraged and discontinued the treatment after the first series of sittings. About twelve hundred hairs were removed in this case.

Case V.—A brunette, teacher, 24 years of age, referred to me by my friend Dr. Charles F. Percivall. She had two very dark, pigmented nævi on the face, which were thickly covered with stout black hairs. The hairs were destroyed by electrolysis, and the nævi disappeared also, leaving a flexible, white, flat scar. There was no ulceration or suppuration following the operation, although the hairs were close together and all were removed at one sitting.

Case VI.—This patient was a drug-clerk, aged 23, who had a number of short, thick, black hairs growing upon the nose. In six sittings he was entirely freed from this unwelcome growth. There is no evidence whatever of any scar upon the smooth integument covering the nose. The openings of the sebaceous glands seem to be entirely normal. In this case the follicles were wide and perfectly straight, and, as a consequence, little difficulty was met in destroying the hairs. A few of them returned, which were destroyed at subsequent sittings.

Case VII.—A seamstress, brunette, 25 years of age. She had a pretty free growth of hair upon the chin, and a noticeable moustache. In this case also there were many of the long, fine, light hairs so troublesome to remove on account of the difficulty of getting the needle properly into the follicle. The patient is still under treatment, but the progress in her case

is very encouraging, as only a small proportion of the hairs return.

PIGMENTED NÆVI.

Case VIII.—A medical student, aged 20, had several brown, elevated nævi upon the face. One, about the size of a split pea, upon the upper lip, gave him considerable annoyance on account of the disfigurement it occasioned. The growth was transfixed by a fine steel needle (a jeweller's bristle), and the current from eight cells passed about a minute. The needle was then withdrawn and inserted at right angles to the former puncture and the current again passed. This procedure was adopted with all the other growths upon his face. On the following day each spot operated on was covered by a dry, brownish scab, which fell off on the third day. Two months after the operation, the site of the nævi could no longer be discovered. Absolutely no cicatrix was produced.

Case IX.—A young lady, teacher, light blonde, 19 years old. The patient had eight pigmented moles upon the face, varying from one-eighth to one-fourth of an inch in diameter. Some of them were elevated and others flat. Electrolysis, as in the last case, was perfectly successful in causing the disappearance of the blemishes after three sittings. No scars remain.

Case X.—Mother of the preceding patient. She is 40 years of age, complexion dark. She had a prominent brownish mole at the tip of the nose, and two small patches of xanthoma on the upper eyelids. Electrolysis was used on all the growths. The mole disappeared after the first operation. In the xanthomatous growths the operation was repeated at the end of three weeks, with complete success. This patient exhibits no evidence of disease of the liver or other internal organ.

Case XI.—This was also a case of small pigmented nævi upon the face in a young man, 21 years of age. One sitting resulted in the permanent removal of the blemishes.

PAPILLARY AND EPITHELIAL NEW FORMATIONS.

Case XII.—A young man, aged 23, with gonorrhœal warts situated on the corona glandis and on the mucous surface of the prepuce. They had been previously cut off with scissors, but had returned. Cauterization with nitric acid was proposed to him, but declined on account of the pain involved. Electrolysis was entirely effective in removing them in two sittings. The growths have not returned.

Case XIII.—A professional friend, aged 50, with a branching, rapidly-growing wart on the upper lip. It was frequently irritated in shaving. Contemplating the possibility of the growth becoming malignant if subjected to constant irritation, he applied to me to have it removed. By means of electrolysis, the growth being transfixed by the needle in several directions, it was entirely destroyed in two sittings. No scar was left to mark the site of the growth. The pain was slight.

Case XIV.—A man, aged 36, with a hard, flat wart upon the forefinger. It was removed by the same procedure, passing the needles through the skin under the growth. No ulceration or scar was produced.

SEBACEOUS CYSTS.

Case XV.—A medical man, aged 38, with an enlarged sebaceous follicle on the nose, which frequently became as large as a small pea. Two sittings, during which the needle was inserted into the gland-duct as well as passed through the base of the little tumor in several directions, resulted in its total disappearance.

Dr. Hardaway speaks highly of this method in the treatment of the small retention-cysts called milium. It promises to be a valuable substitute for excision in the case of small wens, especially about the face.

ACNE ROSACEA.

Case XVI.—An aggravated case of acne rosacea in a man, 36 years of age. The usual treatment was followed for the acne and the diffused redness of the skin. Visible vessels were pierced with the electrolytic needle and so obliterated. The patient, after obliteration of all the enlarged vessels, returned to his home in Nebraska much improved. In a letter recently received he asserts continual progress towards recovery.

Case XVII.—A case of simple rosacea in a man aged 38 years. The enlarged veins were pierced in a number of places with the needle, and a current of six cells passed for two minutes. In most cases a single operation resulted in the obliteration of the veins. In some a second or even a third operation was necessary before the result could be pronounced a success.

INGROWING EYELASHES.

Case XVIII.—Michel, of St. Louis, gave the first impulse to the introduction of electrolysis in dermatology by his successful use of the method in removing ingrowing eyelashes. I have had one case of this annoying trouble, in which the mal-directed hairs were destroyed by means of the electrolytic needle. In order to diminish the pain produced by the operation, I used a five-per-cent. solution of cocaine with success. I have on several occasions used the cocaine on the skin when removing the hairs from an especially sensitive area, such as the cheek and angle of the jaw, but without producing any noticeable reduction of sensibility.

VASCULAR NÆVI.

Case XIX.—My friend Dr. W. A. Hardaway has had good success, as demonstrated

to me by a case under his care, with electrolysis for the destruction of vascular nævi (port-wine mark of the skin). In the only case in which I have had opportunity to try it since seeing his case, the success was only moderately good. Where these nævi are small, and especially in young children, careful excision, followed by a plastic operation, promises excellent results. In adults, however, electrolysis deserves a patient trial in the treatment of this deformity.

The above constitutes my experience with this method, which I believe is destined to prove its usefulness in a great many affections, of minor importance, perhaps, so far as their effect on the duration of life is concerned, but which nevertheless are very annoying to those who are afflicted with them. To many women the removal of a beard or other disfiguring blemish is of as much importance as the cure of a pneumonia or a chronic internal disease which may tend to shorten life.

BRIEF NOTES ON THE TREATMENT OF ACUTE CORYZA.*

BY SOLOMON SOLIS-COHEN, A.M., M.D.,

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IT is related of a celebrated French physician that, when asked how he treated a cold in the head, he replied, "With contempt." That some colds may be safely treated in this manner universal experience will testify. That many attacks of acute coryza cause pain and distress sufficient to demand the best efforts of the physician for their relief must be not alone within the observation, but among the personal experiences, of all. The writer has had occasion to test the methods here related upon his own person, and can therefore speak with a realizing sense of the relief afforded from annoying symptoms. The property possessed by belladonna of checking secretion from mucous surfaces long ago suggested the employment of this drug in acute coryza. I have, however, been unable to find any reference to it in the treatises of Mackenzie or Bosworth, the most recent works published in the vernacular upon the special subject of diseases of the upper air-passages.

Dr. Beverley Robinson,† of New York, speaks highly of the local use of a powder of belladonna-leaves, morphine sulphate, and acacia, but does not mention the internal administration of the drug. J. Solis-Cohen‡ alludes favorably to the use of the tincture of belladonna in doses of twenty minims. M. Gentilhomme§ reports that he has succeeded in arresting the disease in several bad cases, attended with abundant secretion, fever, and embarrassment of respiration, by the use of atropine sulphate in doses of one-half milligramme given at the commencement of the inflammatory period. My own experience with atropine has been equally fortunate. It must be given early in the attack, and when so given is veritably abortive in nine cases out of ten. I have tried several methods of administration, employing granules and triturates of $\frac{1}{100}$ gr. and $\frac{1}{120}$ gr., and a solution of one grain of the salt to the ounce of water, of which the usual dose is four minims (gr. $\frac{1}{120}$). The latter method is preferable with patients upon whose discretion we can fully rely, and to whom we feel no hesitation in intrusting a prescription for a poisonous drug. With other individuals it is safer practice to hand the patient three or four triturates or granules of the dose desired, writing explicit directions as to their use upon the envelope containing them. The manner of using the remedy which has proved most efficacious is to administer $\frac{1}{120}$ grain at the first interview (if this be on the first or second day of the attack), and to repeat the dose in four hours, provided there be then no dryness of the throat. The rule for the third dose is the same,—dryness of the throat or dilatation of the pupils being the indication to stop the remedy.

When a case is seen during the first twenty-four hours, two doses will often bring the affection under such complete control that the patient does not resort to any further medication. Secretion of thick yellowish mucus, requiring the occasional use of the handkerchief, will, however, usually persist for about a week, but there is ordinarily no embarrassment to breathing. Sometimes it is necessary to repeat the dosage in the same manner on the following day, the indication being renewal of watery discharge, suffusion of the eyes, and

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* Read before the Philadelphia Laryngological Society, February, 1885.

† A Practical Treatise on Nasal Catarrh. New York, 1880, p. 600.

‡ Diseases of the Throat and Nasal Passages. Second Edition. New York, 1879, p. 336.

§ Union Médicale, September 4, 1883; Medical and Surgical Reporter, December 15, 1883, p. 66.

more or less "stuffiness" of the nose. In order to secure the full therapeutic benefit of the atropine in severe cases, it must be pushed until the physiological effect is produced,—that is, dryness of the throat and dilatation of the pupil. One patient complained of the former symptom that it was worse than the disease. In one case $\frac{1}{16}$ gr. of pilocarpine hydrochlorate was administered by the mouth, with the effect of relieving the unpleasant sensations. Ordinarily, however, the dryness is readily overcome by allowing a few pellets of ice to melt in the mouth, or by rinsing the mouth from time to time with cold water.

More recently the effect of cocaine in emptying the engorged venous sinuses of the nasal mucous membrane, first prominently called to professional attention by Dr. Bosworth,* has led to its employment in the treatment of acute coryza. While the relief is almost immediate, even in cases where there has been great obstruction to breathing, the effect passes away in from two to three hours, and the drug is too expensive† to use as often as may be necessary. I have found the fluid extract of erythroxylon to be equally efficacious, if instilled into the nose in sufficient quantity. The alcohol of the fluid extract is, however, objectionable, producing considerable smarting. An infusion can be made of equal strength‡ by the addition of a small quantity of glycerin, and by this means we get rid of all the unpleasant effects not inseparable from the drug. The employment of a preparation of coca will give excellent results in connection with the atropine treatment. The patient is given a glass "dropper" slightly curved at the end, such as is used by oculists, and instructed to flood the nose with the infusion of coca whenever it becomes "stopped up." He is directed to draw the medicine back into the throat, in order to make sure of reaching the posterior ends of the turbinated bodies.

While not denying the advantage of the good old methods of treating acute coryza with Dover's powder, foot-baths, etc., I am convinced that the plan above described—namely, small doses of atropine pushed to the point of physiological effect, with local use of cocaine or infusion of coca—will be found the most convenient and effective for the majority of cases. Like everything else, even quinine, it will sometimes fail. In one case of acute coryza I tried pilocarpine, producing but slight perspiration, but apparently curing the cold. As my experience is limited to this one case, which may be an example of *post hoc* and not *propter hoc*, I do not claim anything for the treatment. In all cases, however treated, a brisk saline cathartic administered at the outset is found of the greatest advantage.

Where cases are seen too late to employ atropine with advantage, good results have sometimes been obtained from ammonium salicylate in doses of ten to fifteen grains, repeated every second hour until *tinnitus aurium* is produced. Salicin, salicylic acid, and sodium salicylate have not seemed to be equally efficacious with the ammonium salt.

In a few cases of influenza, in which the coryza has been quite severe, in some of which there has been much conjunctival distress, and in all of which headache and lassitude have been marked, though the febrile symptoms have been mild, cinchonidine salicylate has apparently been of great benefit, while the infusion of erythroxylon has been of inestimable value in relieving the distress occasioned by the nasal symptoms.

* Medical Record (New York), November 15, 1884.

† This objection, in the interval between the reading and the publication of this paper, has been obviated.

‡ Mr. Stedem, of Philadelphia, makes an infusion of coca, two grains to the minim. I am indebted to Dr. Jurist for a specimen of this preparation.

TRANSLATIONS.

Treatment of Asthma by Pyridine.—Prof. Germain Sée terminates a lecture on the treatment of nervo-pulmonary asthma and cardiac asthma with these conclusions:

1. Whatever may be the form of the asthma,—whether nervous, emphysematous, or catarrhal, whether primary or of gouty or dartrous origin,—the iodides constitute the true curative agents. When iodism supervenes, pyridine will come in play. It should be considered as the most certain means of curing the access. It is the best palliative, as iodine is the efficacious remedy.

2. Pyridine is superior to the injection of morphine. Its action is more durable and much more inoffensive.

3. In a case of nervous asthma the access may thus be stopped completely. In grave

asthma complicated with permanent pulmonary lesions, the duration of the treatment should continue for eight or ten days, in order to insure the permanency of the result. When there is cardiac asthma, with or without renal disease or dropsy, pyridine can still render the greatest service in combating the most persistent and the most painful of the symptoms which torment the cardiac patient,—that is to say, oppression, whether continuous or paroxysmal.

Pyridine is a product of combustion of organic matter, and is thought to be the curative agent in the smoke derived from asthma cigarettes, pastilles, etc. It is a colorless liquid, with a penetrating odor, and the method of administration recommended is to pour some out upon a plate in a small room and inhale the vapor, three times a day, for from twenty to thirty minutes at a time.

The physiological effects of pyridine are quite positive, reducing the reflex excitability of the spinal cord and of the respiratory centre of the medulla, and when inhaled it soon appears in the urine. It causes marked somnolence without loss of intelligence and without insensibility, therefore differing decidedly from the effects of chloroform and ether.—*Bull. Gén. de Thérapeutique*, June 30.

Treatment of Croup by Fumigations.—The method of treating croup by fumigations is growing in favor. Dr. Aumaitre reports a case (*Gaz. Méd. de Nantes*, No. 8) of a boy, 5 years of age, who had a troublesome, brassy cough, with difficult respiration. The submaxillary region was tumefied by glandular engorgement; on the pillars of the fauces and the tonsils were diphtheritic patches. Ipecac was given, and false membranes were expectorated; the throat was swabbed with lemon-juice, and small doses of aconite given hourly, as there was considerable fever. The ipecacuanha was directed to be repeated the same evening, and, in order to act topically upon the false membranes, a five-per-cent. solution of phenic acid in glycerin was prescribed, of which a teaspoonful was vaporized with heat sufficiently to have the room appear smoky. The next morning his mother again made him vomit, as his breathing was embarrassed again; but he had passed a good night. Tubular pieces of false membrane had been expectorated, and the diphtheritic deposit in the throat was less marked. The fever also was less, and the patient was better. The vapors were of great service in relieving the cough and the breathing. The same treatment was continued, except that spirits of turpentine and boiling water were ordered to be used for inhalation. The patient made a rapid and complete recovery after five days' treatment. The prompt recovery was attributed to the use of the carbolized and terebinthinate fumigations.

Inutility of Curare in Epilepsy.—Messrs. Bourneville and P. Bricon conclude, from a number of experiments reported in the *Archives de Névrologie*, that curare is of no value in epilepsy, the results obtained being quite different from those reported by others. Of twenty-one cases suffering with various forms of epilepsy, some adults and some infants, subjected to treatment by hypodermic injections of curare for a period of from three to six months or more, only one appeared to derive any real benefit. One other seemed slightly ameliorated. In a third the muscular movements were less violent, although the number of attacks was not diminished. The results, therefore, were not encouraging, and the reporters think that curare should not be retained on the list of remedies useful in the treatment of epilepsy.

Tannate of Mercury for Syphilis.—The most eligible form of mercurial for the treatment of syphilis, according to Leblond, Lustgarten, and Kaposi, is the tannate, containing fifty per cent. of the metal.

℞ Hydrargyri tannat., (3 g.) gr. xlv;
Ext. et pulv. glycyrrhizæ, q. s. M.

S.—Make sixty pills, and take from four to eight daily.

This form of mercurial does not disturb digestion, and has been found most efficient.—*Revue Médicale de Louvain*, June, 1885.

Hysterectomy by the Vagina.—At the meeting of the Société de Chirurgie for June 24, M. Tillaux and M. Ferrier each reported a case of vaginal operation for the removal of the uterus for epithelioma. Both cases completely recovered from the operation.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 8, 1885.

EDITORIAL.

JOURNALISTIC CHANGE.

THE MEDICAL CHRONICLE, a successful monthly medical journal edited by Dr. George H. Rohé, of Baltimore, has, with the present issue, become consolidated with the PHILADELPHIA MEDICAL TIMES.

We take special pleasure in announcing that Dr. Rohé will hereafter be associated in the editorial management of the TIMES, and will pay attention particularly to giving Baltimore and Washington medical matters greater prominence in its pages than they have hitherto received.

In token of its increased scope and non-sectional character, the word "Philadelphia" will be dropped from its title at the end of the current volume in September. We hope that these changes will prove acceptable to our readers.

BACTERIA AS THERAPEUTIC AGENTS.

IT is a fact repeatedly demonstrated in the experience of those engaged in culture-experiments that some of the recognized pathogenic schizomycetes are very liable to destruction by the ordinary bacteria of putrefaction. The suggestion has been half humorously, half seriously made that this fact might be utilized in the treatment of disease, but the honor of the first actual application of this physiological antagonism to therapeutics appears to belong to Prof. Arnoldo Cantani, of Naples.* The first experiments made by Prof. Cantani were directed to tuberculosis, and he selected the bacterium termo to antagonize the bacillus tuberculosis of Koch. He proceeded first to determine the effects of bacterium termo upon the animal organism when applied to the conjunctiva, or injected into the stomach or under the skin, and especally when inhaled into the lungs in the form of spray. The results of numerous experiments made upon animals demonstrated conclusively the complete innocuousness of this form of bacteria when introduced in this way. He then administered a solution of a pure culture of the bacterium termo to a patient forty-two years of age, presenting the usual symptoms of acute pulmonary phthisis,—fever, great emaciation, and loss of strength,—with a cavernous excavation in the left apex, and sputa containing tubercle-bacilli in abundance. The results were sufficiently striking to give in his own words. "On the 4th of May the inhalations began, using a pure culture of bacterium termo diluted with gelatin and meat-broth, by means of a hand-spray apparatus with double rubber bulb. The expectoration rapidly decreased, until it ceased entirely during the last few days of the experiment. The tubercle-bacilli likewise soon diminished from the expectoration, while the bacterium termo could now be detected in their place. On June 1 the tubercle-bacilli were completely absent from the expectoration, and did not reappear, while bacterium termo became more and more abundant (the expectoration being examined daily). The fever decreased so that during the last few days of the observation the evening temperature did not go above 38° C. (100.4° F.), and the bodily weight was decidedly increased. The appearance of the patient greatly improved, the general condition became excellent, and the patient felt much better." Although animals inoculated with the sputum at the beginning of the treatment had presented signs of local and afterwards of general tuberculosis, those inoculated with the sputum found to be free from tubercle-bacilli

* Versuch einer Bacteriotherapie. Centralblatt für die Medicinischen Wissenschaften, No. 29, July 18, 1885.

remained healthy and gave no trace of tubercular disease.

This demonstration satisfies the requirements of science, and apparently establishes it as a fact that the antagonism known to exist between the bacterium termo and the bacillus tuberculosis may be utilized for therapeutic purposes *cito, tuto et jucunde.* At the same time, Prof. Cantani is not sanguine as to the further application of this principle in treating cases where the bacilli have become embedded in remote organs; but it affords a hope that something may be expected from this treatment where the tuberculous process in the lungs is not extensive and appears to be more or less superficial. It is also suggestive as regards the employment of other bacteria which are known to affect unfavorably the growth of certain pathogenic micro-organisms.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

IN my last letter the social aspect of institutions supported by voluntary contributions was considered, and the prospect is certainly clouded. In this letter something may be said about the political aspect of medicine at the present time. We are to have a large addition to the electorate in a socially downward direction; and this fact offers an opening for men other than the aspiring barrister, the successful commercial man, and the country squire with local influence at his back. There is also redistribution approaching the equal electoral districts which formed one of the six points of the Chartist agitation of fifty years ago. With such a prospect, of course many professional men see an opening for their advancement, and certainly a few more medical men in the House would be an acquisition. The few medical men at present in the House are none of them prominent members,—Sir Lyon Playfair not counting as a medical man, though respected by the profession. (It is a pity, in one sense, that this honored parliamentary veteran has chosen to stand for South Leeds, instead of continuing as the representative of the Universities of Edinburgh and St. Andrew's. The *Daily Chronicle's* explanation of this is that so many of the medical graduates of these two universities in good country practice are Tories. Certainly this is true of the men of my personal acquaintance.) And it would be well for the House of Commons, and well for the people of the United Kingdom, if more medical men were in the House, and that these should be men of earnestness of purpose, of energy and determination, and fluent speakers.

One such man is coming forward for Chester in the Liberal interest,—viz., Dr. Balthazar Foster, the leading physician of Birmingham. Dr. Foster is still a comparatively young man. A smart man, inclining to be short, of pleasing address and good manner,—a pleasant, cheery gentleman, with his wits about him,—he soon made his way in Birmingham, even among some very able men. He is not a copious medical writer, but what he has published is of excellent quality and stamps him as one of the leading physicians of the day. Some time ago he wrote a pamphlet on "The Political Powerlessness of the Medical Profession," in which he told the medical world some home-truths which it could not deny. He urged there that, instead of being so afraid of the world, in the shape of actual or potential patients, medical men would do better for themselves and better for their profession if they took up a little firmer position and interested themselves in public affairs. They were too afraid of offending a patient—in other words, too exclusively devoted to their own individual interests—to discharge their duties as citizens, in his opinion; and yet they possessed knowledge which rendered it eminently desirable that they should form part of certain public bodies, especially in this day of sanitation and of preventive medicine. Acting on this belief, Dr. Foster is about to enter Parliament. In so acting he is doing well. Not only has he a good local position, with a reputation as a medical author, but he is also President of Council of the British Medical Association,—a position of eminence and weight. He is the representative of the representative principle, and took an active part in the working out of the new By-Laws of the Association, which have rescued the Association from the thraldom of a set of older members of Council, known among the reform element as "barnacles." They were Vice-Presidents and members of the Committee of Council *ex officio;* and a very conservative party they were. But they have been swept away, and directly-elected representatives have taken their place,—men responsible to the members who send them up, and who have to give an account of their stewardship. The Association has reformed itself, and in its new purity stands forth as the representative of the medical profession; and, what is more, its voice will be heard and its influence will be felt.

The General Medical Council is a dead failure. Consisting of the representatives of the medical corporations, with a sprinkling of members chosen by the Crown, it has disappointed every hope entertained of it, and

falsified every prediction of its utility. It is hopeless. It does not even undertake the labor of prosecuting unqualified practitioners, leaving this part of its duty to any one who will undertake it. The medical corporations do not represent any interests but their own, and no good can come or be expected from them. It is notorious that the much-talked-of Medical Bill has been thwarted by the persistent opposition of the threatened corporations.

The British Medical Association consists of medical practitioners, and speaks the voice of the medical world, and in this Association Dr. Foster is at present the guiding spirit. When he gets up to speak in Parliament, he will speak with authority and a sense of responsibility to the large constituency of which he will be the representative as truly as he is of Chester. That such a man will be an advantage to the new House there can exist no doubt, and his bearing and attitude will probably give to medicine within the walls of St. Stephen's a weight hitherto wanting.

The House decided upon the medical profession aiding the Registrar-General by giving certificates of death, without saying as much as "by your leave;" and once the certificate given, each registrar grants copies, and does as he likes, pocketing anything that is to be got, while the doctor gets nothing. I heard a fine old country doctor the other day at Gloucester say emphatically on this point, "Had the government laid some duty upon the agricultural laborer without remunerating him for it, the agricultural laborer would just have told the government that he would not stand it; but we,—why, we are only doctors: we will stand anything!" Individually, he did not look like a man who would stand much.

And now there is an agitation against medical relief disqualifying a man for the franchise. Anything else which he cannot pay for makes a pauper of him; but medical aid, why, that can be thrown in,—that does not matter! If it was a handful of potatoes, then the man is a pauper. It all tells what is the estimate of the profession in the eyes of the public. The General Medical Council cuts a pretty figure before the world, and the manner in which medical relief was discussed by a lot of tatterdemalions in Hyde Park, the other Sunday, ought to have roused the infirm old lady in Pall Mall (the College of Physicians) into some sort of indignation, had any of the courage said to be innate in an Englishman survived in her aged bosom. But no; nothing of the kind! Medical men must give no offence! On no account must they do anything—but allow people to trample on them! That is the creed of the respectabilities who regard themselves as "the heads of the profession." Well, people generally reap as they sow!

As an instance of what members of the profession can do in the way of abasement, we may take the case of another aspirant for Parliamentary honors in the ranks of the profession. On previous occasions I have had to express my dissatisfaction with the conduct and behavior of Mr. Abraham Ernest Hart in his position as editor of *The British Medical Journal*. Now he comes before the public as a Liberal candidate for Mile-End, in East London. "They seem to have made up their minds about the Contagious Diseases Acts at the East End. The Mile-End electors have not only made up their own minds, but they have even changed the mind of Mr. Ernest Hart, who last night pledged himself to vote for the unconditional repeal of the obnoxious measure." For the better understanding of the Contagious Diseases Acts, it may be said briefly that the Contagious Diseases (Human) Act refers to the public women of garrison-towns, who are by its machinery largely prevented from spreading disease by their trading in their persons. Of the good which the Acts have accomplished there is no question, and, next to vaccination, the profession is most solid on the Contagious Diseases Acts. Yet, at the imperative mandate of the radical riff-raff of Mile-End, this prominent member of the medical profession deserts his colors and goes over to the enemy!

The *Pall Mall Gazette* follows up the subject by another paragraph, where it states, "Mr. Ernest Hart's suspiciously sudden conversion to a sound belief in the abominable character of the Contagious Diseases Acts has aroused misgivings among those who ought to be rejoicing over the penitent. Mr. Hart, they say, was a member of the central committee of the society for extending the Contagious Diseases Acts to the whole civil population, and his sudden conversion is really due to local pressure applied by zealous and intelligent electors in Mile-End. It may be so; but if Mr. Hart is well looked after, he may stand firm in his new path. It is at least a much better one than the demoralizing superstition which he has now publicly repudiated."

As a man zealous for the honor of his profession, the writer experiences some difficulty in keeping his temper calm over this matter. Here is a medical man turning a renegade and an apostate, giving up the convictions of the profession at the beck and nod of "zealous and intelligent electors" at Mile-End. Are these prominent local politicians better judges of such a subject than the medical profession? Cobblers and old-clothes men, who know nothing whatever but the one-sided literature furnished to them by crazy fanatics, dictate to a medical man—and one, too, who has been in so peculiar a position for knowing the actual facts, and who has hitherto lauded the Contagious Diseases Acts—what he has to believe and how he has to vote as their nominee. A pretty pass this, surely. Here were we rejoicing to think that, with

some more medical men in Parliament, medical interests will be better looked after and the profession treated with more respect, and what do we see? A medical man turning his coat and forsaking his faith at the bidding of the rag-tag and bobtail of the East End. Instead of strengthening the position of medicine in the House of Commons, here is the man who has had the most ample information on the subject pledging himself to vote for the repeal of what has been a most beneficent measure of legislation, as the voice of the profession testifies, and thus helping to the utmost of his ability to discredit his profession before the House of Commons. What the Association will do in the matter remains to be seen. Whether they will endorse this conversion and sanction it by retaining Mr. Ernest Hart in his official position will soon be apparent. The annual meeting at Cardiff comes off this month, and no doubt the matter will be warmly debated. Perhaps Mr. Hart may find himself "well looked after" at the other end of the pole. The Association may still be prejudiced enough—not being under "local pressure applied by zealous and intelligent electors" at Mile-End—to believe in "the demoralizing superstition" which this candidate for Parliamentary honors "has now publicly repudiated." The question arises, Will the Association "repudiate" him?

How it can, with any claim to self-respect or consistency, retain Mr. Hart's services the writer cannot see. But, then, his vision may be defective or not perfectly achromatic. Anyhow, it will be a curious spectacle—worth putting on record—to see the member for Mile-End repudiating on the floor of the House of Commons his cherished convictions as editor of the *British Medical Journal*,—especially if he still remain the last.

My old teacher of logic used to speak of a thing being "true in science, but false in religion." So, in the editorial office and the columns of the *British Medical Journal* the Contagious Diseases (Human) Acts are an instance of benevolent legislation; on the floor of the House of Commons they are a "demoralizing superstition." Of course, much is forgiven and tolerated from an erring man who also has his good points and possesses unquestioned talent as an editor: but a line must be drawn somewhere. The barber who objected to shave a chimney-sweep was reminded that he had just shaved a miller. He replied, "I must draw a line somewhere: so I draw it at millers." Where the Association will draw its line remains to be seen. Only it can scarcely expect more consideration, more respect, more fitting treatment from the House if it permits one so peculiarly placed to flaunt in its face his conversion to a belief in the iniquity of Acts which its members hold to have done unspeakable good, and which have the undivided support and adherence of the medical profession. The profession must decide—or, rather, that select portion of it which forms the Association—whether they are or are not deserving of the respect of the public. "The zealous and intelligent electors"—the rabble—of Mile-End know their minds and will look after their nominee; they will not tolerate any flinching. There is no escape from their grip; they will hold their man tight enough. The only loop-hole for him is the leniency of the members and the influence he can bring to bear upon the rulers of the Association. Hitherto he has found apologists and supporters even among many of the leading men in the profession. Possibly he has his own reasons for thinking they will screen him once more. If they do, what can the medical profession over the face of the globe think of us?

Another reported candidate for a new metropolitan constituency is Dr. Danford Thomas, the respected coroner for Central Middlesex, the successsor of Wakley, Lankester, and Hardwick. Dr. Thomas is favorably known personally and officially to his profession, while his courtesy, considerateness, and general good sense have made him popular with the lay persons with whom he is brought into contact. That he would be listened to with attention by our legislators is certain, and from his official position he would be able to speak with authority on certain topics important to the public health and morals. Especially will such medical members be required when the Criminal Law Amendments Bill, protecting girls under fifteen years of age (which, as said in my last letter, has already passed the Lords), comes to be discussed in the House of Commons.

If the subject is gone into as it just has been threshed out by a leading London evening paper,—whose articles might well be entitled "The Business Aspect of Libertinism,"—I am not quite sure whether a respectable medical man could listen to, let alone take part in, the discussion.

There are, too, other matters to be gone into where it will be of decided advantage to the House of Commons to hear medical men of experience speak, and where it will be well that there are competent persons to correct promptly and on the spot misstatements which are certain to be made there on the subjects of vivisection and vaccination. It is a curious fact that the Radical party are so venomously opposed to anything the medical profession upholds. They detest vivisection, of which they know nothing; they even call in question the value of vaccination. They cannot remember the pitted and disfigured population before the days of vaccination; they do not read their histories, and know not how many of the Stuarts were the victims of smallpox. They see in Jenner's magnificent discovery only a means of spreading disease. They hanker after homœopathy

and deride legitimate medicine. They wilfully shut their eyes to the evidence in favor of the Contagious Diseases Acts, and inflame themselves against them by the perusal of one-sided literature. There is a poor prospect for medical interests in the next House after the newly-enfranchised voter has had his say,—unless there are medical men who know their own minds in the House. It will, indeed, be well if the profession be fairly represented,—not by such weak-kneed brethren as the would-be member for Mile-End, but by men like Dr. Foster, who can be trusted. For certain it is that if the medical profession does not bestir itself and set its house in order, the present contemptible position of the said medical profession will be aggravated, and more insolent liberties be taken with it than even what has occurred in the past. But then the men who are in position here at the present time listen no more to the warning voices lifted up by sundry individuals who see the tendency and the direction in which the profession is drifting than did the Hebrews of old to Isaiah and "the voice of him that crieth in the wilderness, Prepare ye the way of the Lord." The Lord's ways are not their ways!

J. Milner Fothergill.

BALTIMORE.

Leprosy—Trichinosis—The Free Excursion Society and the Thomas Wilson Sanitarium for Sick Children—A Druggist's Fatal Mistake—Personal.

Baltimore, August 1, 1885.

THE "Chinese problem" has recently attracted considerable attention in this city. It is an open secret to "men about town," that several opium joints are in full fume in this city. Still graver, however, is the discovery of a case of leprosy among our resident Chinamen a few days ago. The physician who relates the case believes his diagnosis to be correct, but, inasmuch as the Chinaman left the city for New York as soon as he became aware of the doctor's suspicions, it is not at present possible to verify the diagnosis absolutely.

The patient was employed in a laundry doing a large business in the centre of the city, and if the disease is as contagious or infectious as claimed by many, we may, perhaps, soon look for an increase in the number of cases of this justly-dreaded disease.

Baltimore now shares with a few localities in Louisiana, Minnesota, and Wisconsin the unenviable reputation of having furnished a group of cases of leprosy. This Chinaman makes the fifth case reported in this city within the last seven years, two of which were natives of the State. One of these had never been beyond the limits of the State. Three of the cases lived for a time pretty near each other in one part of the city. The other two cases were importations, one being a native of Barbadoes and the other the Chinaman above mentioned.

Five cases and three deaths from trichinosis have occurred in this city within the last two months. In the third and fourth cases only was an accurate diagnosis made, and in one of the cases verified post mortem. The history of the cases, which are the first reported in this State, is as follows. A German laborer, his wife, and five children composed the family. On May 9 last the wife purchased one and a half pounds of fresh pork, which on the following day was eaten in the raw state by the husband, wife, and three of the children. One of the children ate only a mouthful of the meat, and escaped with very slight symptoms, none, perhaps, being characteristic of trichinosis. Two days after eating the pork the husband was taken sick with violent abdominal pains, which increased in severity, accompanied by vomiting and purging, until his death on May 16. The fatal result was attributed to cholera morbus, and was so reported to the health department by the physician who attended the case.

The wife and two of the three children were also taken sick with abdominal pains, and on June 1 were admitted into the City Hospital, where one of the children, a boy, died four days later with symptoms of intense gastro-intestinal irritation. No autopsy was made in this case, and the true cause of death was not discovered. It is only in the light of the two subsequent cases that the probable diagnosis of trichinosis seems justified.

The mother and the remaining child, a boy of eight, had, in addition to the violent abdominal pains, some fever, œdema of the limbs, and great tenderness of the muscles. There was little intestinal derangement in these cases, the mother only suffering from slight nausea in the early stage of the disease. The œdema suggested some renal derangement, but examinations of the urine were negative. After the death of the first patient in the hospital, the obscurity of the diagnosis in the three cases admitted led to a thorough investigation into the previous condition and habits of the patients, by Dr. F. C. Bressler, one of the resident physicians. He soon ascertained the incident of the raw pork, which gave him a clue to work up the remaining cases. The mother was the most seriously affected, and her symptoms were daily becoming more severe. After a patient inquiry, the diagnosis of trichinosis was made by Dr. Bressler, and concurred in by Dr. Bevan, one of the visiting surgeons. The boy eventually recovered, and was taken away by relatives, but the mother grew worse, and finally died on July 22, six weeks from the time of eating the raw pork.

The autopsy demonstrated intense colitis, with ulcerating patches extending completely

through the mucous and muscular coats of the bowel. This condition seems rather remarkable, in view of the almost total absence of purging in this case. Microscopical examination of muscular tissue demonstrated the presence of the *trichina spiralis* in considerable numbers, thus absolutely verifying the diagnosis.

Doubtless other cases have occurred here from eating infected pork, but up to this time none have been reported. It is scarcely possible that the afflicted family was the only one that ate its pork raw.

Two of the most deserving charities of this city are devoted to the relief of the sufferings of poor children during the hot weather. They are the Free Excursion Society and the Thomas Wilson Sanitarium for Sick Children. The first of these organizations owns a fine place on the Patapsco, to which excursions are made every Thursday during the summer. Children — either sick or well — and their mothers or other relatives are given a day's relief from the heat, dust, and noise of the city and the foul atmosphere of crowded houses, and enabled to spend a day of enjoyment in the woods and upon the water. Tickets are distributed to the most deserving by the police force, who are recognized among us as the best qualified and most judicious dispensers of charity. Up to the present time this summer upwards of ten thousand persons have received the advantage of these excursions. At the grounds lunch is served by a committee of the Society. Two or three physicians are always in attendance to respond, gratis, to calls for their services, and medicines are furnished whenever necessary. A temporary hospital is on the grounds, where sick children are properly taken care of.

The expenses of the Society are met by voluntary contributions of money and various articles of food, and the city authorities grant the use of one of the city ice-boats for the purpose of conveying the crowds to and from the grounds.

The other organization referred to has a somewhat different scope. The Wilson Sanitarium is intended only as a retreat for sick children accompanied by their mothers. It is beautifully situated on the Western Maryland Railroad, ten miles from the city. The tickets are distributed, free, by the dispensary physicians, and entitle the holder to passage over the railroad, food, medical attention, and medicines at the Sanitarium, where there are always three physicians in attendance, two of them being of the gentler sex. There are fourteen rooms for the accommodation of sick children and their mothers at the Sanitarium, and during the present summer these have been nearly constantly filled. The mothers are allowed to remain until the children are well, when they must give place to others. The beneficiaries are under no expense whatever during their stay. Since the middle of June nearly four thousand five hundred persons—mothers and children—have received the benefits of this noble charity.

Another fatal mistake has been caused in this city during the past week, owing to the carelessness of an apothecary. A physician, desiring to give his own child (a little girl three years old), who was suffering from malarial fever, some muriate of quinine, went personally to the drug-store in order to procure the medicine. The clerk put up the prescription, and a dose of the mixture was given to the patient. Symptoms of opium-poisoning soon developed, which proved fatal after several hours, in spite of energetic efforts to avert death. An autopsy was made, and the stomach turned over to a chemist for analysis.

The latter has not yet made his report, but there seems little doubt that the clerk carelessly substituted muriate of morphia instead of muriate of quinia, since a bottle containing the former was found in the place whence the clerk had taken the medicine, while none of the quinia salt could be found in the store. The coroner's jury committed the clerk to jail pending the chemical analysis.

Dr. George M. Sternberg, Surgeon U.S.A., who was the American delegate to the International Sanitary Conference in Rome, has returned to this city, and is again pursuing his bacteriological researches at the Johns Hopkins University. As the Conference did not finish its work, but adjourned to meet again in November next, it is probable that Dr. Sternberg will soon return to Europe under the orders of the State Department.

G. H. R.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

THE Twenty-First Annual Session of this Society was held at the Pequot House, New London, Connecticut, July 15 and 16, 1885, the President, Dr. WILLIAM F. NORRIS, of Philadelphia, in the chair.

The first paper was entitled

Operation for Removal of Dislocated Crystalline Lens. By C. R. AGNEW, New York.

The operation was as follows. The pupil was dilated with atropine. The patient was then etherized and cocaine was applied. The eye was secured with fixation-forceps. An instrument resembling a two-pronged fork, which was termed a bident, was introduced into the vitreous chamber behind the dislocated lens, pressing it forward. The bident transfixed the eye and held the lens in position. Section was then made in the ordinary

manner and the lens removed. The eye was dressed with absorbent cotton and a black silk bandage. Antiseptic solutions were used, and a four-per-cent. solution of cocaine was applied twice a day. The eye recovered without any unpleasant symptoms.

Extraction of a Dislocated Lens by Dr. C. R. Agnew's Bident. By Dr. DAVID WEBSTER, New York.

The patient received a blow on the right eye. This was immediately followed by loss of sight. Examination showed that the lens was dislocated. No treatment was recommended at that time. Some months later pain suddenly appeared in the injured eye. The lens was found to be cataractous and incarcerated in the pupil. Cocaine was applied, but did not relieve the pain. Atropine relieved the pain. Later the lens became loose, and was found in the vitreous. The tension was normal. It was decided to remove the lens. The bident was passed back of the lens, pressing it forward; the incision in the cornea was then made, and the lens removed with a spoon. The eye was dressed with absorbent cotton, and recovered without complication. $V = \frac{20}{100}$ with 4.50.

With the bident many eyes may be saved if the lens can be brought in sight. There is no danger from injury of the ciliary body.

Dr. H. Knapp thought that in these cases there was not much difficulty in removing the lens, which could often be accomplished with the loss of very little vitreous; but the danger came in afterwards from inflammatory complications, and, where the sight was lost, he thought it better to enucleate the eye at once and thus lessen the dangers of inflammation. He considered the bident, which was exhibited, to be an ingenious instrument.

Dr. C. R. Agnew thought that the bident might also be useful in the removal of foreign bodies from the interior of the eye. He did not acquiesce in the view that enucleation was a simple operation. He regarded it as a serious mutilation.

Dr. C. H. Williams, of Boston, said that there was another alternative than those mentioned, and that was evisceration of the eye,—the removal of its contents and closure of the anterior opening with sutures. This he had performed a number of times with success.

Extraction of the Lens in its Capsule. By Dr. B. ST. JOHN ROOSA, New York.

For the past three years the doctor had been in the habit of removing the lens in its capsule, in a large proportion of cases without iridectomy. The use of cocaine has facilitated the operation. He referred particularly to the method of dislocating the lens. The section is made as usual, but larger. After puncture and counter-puncture are made, the knife is turned on its back, so that it rests on the iris. The knife is then moved up and down two or three times until the lens is seen to move; then the section is completed, and then the lens can usually be removed with no loss of vitreous. The manipulations on the cornea are made with one or two spoons. Sometimes after the operation it is rolled under, but in many cases the pupil is circular. The writer had performed the operation between thirty and forty times, and is satisfied with his success.

Dr. George C. Harlan, of Philadelphia, reported "Two Cases of Sub-conjunctival Luxation of the Lens." In the first case no operation was recommended, as vision was good. In the second case the lens was removed. The doctor thought it well, in those exceptional cases in which vision remains, that the operator should think twice before resorting to removal.

Dr. D. F. Wadsworth, of Boston, reported "A Case of Dislocation of the Lens under Tenon's Capsule." The eye had been injured two weeks before the patient came under observation. There was loss of sight, pain about the eye, and irritation of the other eye. The cornea was hazy, and there was blood in the anterior chamber. The eye was enucleated, and it was found that the lens was beneath Tenon's capsule, and that it was held in this position by inflammatory tissue.

Treatment of Purulent Conjunctivitis. By Dr. J. A. ANDREWS, New York.

The treatment is based upon the belief that the contagious element is of the micrococcus variety. He related a case in which he had secured an inoculation of the seventh generation of a pure culture of a gonococcus. This is the first case inoculated with the gonococcus. He showed an instrument which he had devised to wash out the conjunctival culde-sac. It consisted of an eye-speculum with hollow arms, through which fluid may be passed. He had found bichloride-of-mercury solution (1 to 10,000) serviceable, but apt to irritate. A six-per-cent. solution of boric acid was also found efficient. A two-per-cent. solution of carbolic acid is useful, as it inhibits the movements of the white corpuscles. Irrigation should be maintained for ten minutes, in order to remove all secretion. Nitrate-of-silver solution (two to twelve per cent.) is then used, and an antiseptic dressing is next applied. This consists of vaseline and boric acid or carbolic acid; but he laid especial stress upon the importance of maintaining irrigation of the conjunctiva by means of the instrument referred to above.

Abscess of both Frontal Sinuses. By Dr. CHARLES S. BULL, New York.

The patient had been hit on the forehead, fourteen years previously, with a piece of wood. This produced a fracture of both nasal bones and deviation of the septum. In seven

weeks the wound had closed. Ten years after the accident a swelling was noted at the upper inner angle of the right orbit, which could be made to disappear by pressure. There was comple ptosis. An incision was made into the swelling just beneath the orbital margin, and a large quantity of pus escaped (two or three ounces). The cavity was washed with a five-per-cent. solution of carbolic acid. No connection with the superior nasal meatus could be detected, but the bony septum between the two frontal sinuses was absorbed, and both sinuses were converted into large cavities. The entire ethmoid bone was an immense cavity, the bony structure being absorbed. A number of osteophytes were removed. A drainage-tube was introduced. The patient was discharged six weeks after the operation, and recovered completely. The ptosis disappeared, and the eye was restored to the normal plane.

"A Case of Melanotic Sarcoma of the Orbit" was reported by Dr. Buller, of Montreal, Canada.

Bony Tumor of Orbit. Dy Dr. B. E. FRYER, Kansas City, Missouri.

The patient, a boy, 6 years of age, came under observation April, 1885. There was swelling of left orbit, which included the whole line of the superciliary ridge. It was quite hard. Some time before, the boy had been struck by a piece of wood, but it was thought that no splinter had lodged beneath the skin. It was decided to remove the tumor. This was done, and on examination it proved to be a bony cyst, within which was a small piece of wood. This was enclosed in bone on all sides. The edges of the wound were brought together, and healing resulted without complication.

Dr. W. H. Carmalt, of New Haven, Connecticut, reported the case of a child 10 years of age, from whom he removed a small growth from the upper lid. Six weeks later the growth had returned. An exploratory operation was done, and it was found that the growth extended into the orbit, and that it was impossible to remove it entirely. It was therefore decided not to complete the operation. The child had since died. The tumor proved to be a rapidly-growing sarcoma. He thought that if in young children the tumor appears to be quickly recurrent and not easily isolated, no operative interference should be attempted.

Dr. Kipp, of Newark, thought that in many cases these tumors of the orbit are not primary, but secondary, and that the primary tumor may be in such a position as not to attract attention.

Dr. Harlan, of Philadelphia, reported several instances of inflammatory exudations in the orbit simulating tumors, and illustrating the importance of exercising great care in diagnosis.

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Dr. W. S. Dennett, of New York, exhibited a series of new test-letters.

Dr. Norris, of Philadelphia, presented a new sheet of metric test-letters, devised by Dr. Oliver, of Philadelphia.

Dr. C. R. Agnew, of New York, made a brief reference to a case of occasional or simulated blindness, in which the vision suddenly returned.

Dr. Theobald described a similar case, in which there was sudden blindness. The pupil acted normally, and the ophthalmoscope revealed no disease. A favorable prognosis was given, and the patient recovered sight in a short time.

Dr. Buller, of Canada, thought that in these cases there was for the time being a functional loss of power in the nerve.

Dr. Roosa had been led to believe, from his experience, that in these cases there is a basis for the blindness in the ocular condition. There is a derangement of sight from some condition, and the patient finally imagines that she is blind.

Dr. Harlan, of Philadelphia, thought that there were two classes: one in which there is purely deception, perhaps the result of deranged mental condition, and the second, in which there is a real temporary suspension of function.

Dr. Risley, of Philadelphia, said that some of these cases might be explained by an enfeebled condition of the circulation, in which the heart was unable to force the blood against the normal intraocular tension, and the loss of vision thus results from want of nourishment of the retina.

Other cases of hysterical blindness were described by Dr. Williams, of Cincinnati, and Dr. Andrews, of New York.

Some of the Results obtained in One Thousand Cases of Refraction. By Dr. E. E. HOLT, Portland, Maine.

The writer had been in the habit of recording all the measurements connected with the prescribing of glasses. As a result he had found, in one thousand cases thus recorded, the average distance between the centres of the pupils of the human eye to be about sixty millimetres. The averages of other measurements were given, and the importance of the physician determining and designating them, and then seeing that they were carried out, was dwelt upon.

Rapidly-Progressive Myopia checked by Section of the External Rectus. By Dr. G. C. HARLAN, Philadelphia.

The case was that of a boy of 16, in whom myopia was progressing rapidly. The external rectus was divided seven years ago. The internal rectus was also exercised by the use of prisms. Since then there has been no increase of the myopia.

Three Cases of Progressive Astigmatism. By Dr. SAMUEL THEOBALD, Baltimore.

The first case was that of a young man who, with a high grade of hypermetropia, had an astigmatism of each eye, which required for correction a $+\frac{1}{20}$ C. The case was observed at intervals during twelve years, and during that time the astigmatism increased until finally a $+\frac{1}{13}$ C was needed to correct it.

The second case was one of compound myopic astigmatism in a young man, in which there occurred, along with an increase of the myopia, a growth of the astigmatism during a period of sixteen years from $\frac{1}{16}$ to $\frac{1}{8}$.

In the third case a simple myopic astigmatism in a physician, 25 years of age, requiring a $\frac{1}{24}$ C in one eye and a $\frac{1}{30}$ C in the other for its correction, changed in five years so that a $\frac{1}{11}$ C and a $\frac{1}{18}$ C, respectively, were needed.

The speaker regretted that the examinations had not all been conducted under a mydriatic, as they then would be more apt to carry conviction to the minds of those disposed to be sceptical regarding the progression of astigmatism. He did not believe that the result would have been different. Such cases are not frequent, but it is important that the fact should be recognized. As the increase of astigmatism is probably due to change in the corneal curvature, the phenomenon should be met with more frequently in the yielding myopic than in the relatively stable hypermetropic eye.

AFTERNOON SESSION.

Hypermetropic Refraction passing into Myopic Refraction. By Dr. S. D. RISLEY, Philadelphia.

The doctor had on previous occasions called attention to five cases of a similar kind, and the object of his paper to-day was simply to report six additional cases seen within the past year.

Dr. W. S. Dennett, of New York, made a few remarks on the importance of the examination of spectacles. He exhibited a series of drawings showing the effect of different kinds of lenses on straight lines.

He also exhibited an electric-light ophthalmoscope, a description of which had been printed in the *New York Medical Record.*

An arrangement for the demonstration of refraction and accommodation was exhibited by Dr. Lucien Howe, of Buffalo, New York.

This consists of two bands of thin metal bent in such a manner as to represent the outlines of a double convex lens, and passing through it two jointed rods representing the rays of light ordinarily figured as passing through such a lens and joining at its focus. The flexible bands were attached to each other above and below, so that by approaching or separating the sides they could be made to show less or greater convexity. The rods representing the rays of light were joined near the centre in such a way that, while the two halves could be placed in such a direction as to show the light as entering parallel to the axis of the lens, the other two portions could be bent to a point to show the convergence of rays at the focus. By alteration in the position of these rods, and also in the forms of the bands representing the lens, all the different variations of the laws of refraction and the changes in accommodation can be demonstrated to a class.

Dr. E. Dyer, of Newport, Rhode Island, demonstrated a perimeter which he had described at the last meeting of the Society.

Two Cases of Unilateral Temporal Hemianopia. By Dr. C. S. BULL, New York.

The first case was that of a man, aged 66, first seen in 1884. In 1849 he received an injury which rendered him unconscious. When he regained consciousness he found that he was blind in the right eye. In 1883 he noticed a general obscuration of vision in the left eye. There was no syphilis, no disease of the heart, and no indication of Bright's disease. He had never used alcohol to excess, but smoked and chewed tobacco in large amounts. There was an irregular central scotoma. The media were transparent, and the iris normal. Both optic disks were of a dirty-white color, and in both there was a deep excavation with pulsating veins, and in the left eye there was a large retinal hemorrhage. The tension was normal.

The second case occurred in a man aged 60. He had been knocked down by a horse, receiving a depressed fracture of the frontal bone above the left eye. The patient was unconscious or delirious for four weeks following the accident. When he regained consciousness, he found that the left eye was blind. Examination showed that in the left eye there was somewhat irregular temporal hemianopia. This may have resulted from fracture of the superior orbital plate, with injury to the fibres of the optic nerve going to the temporal half of the retina.

Two Cases of Penetration of the Eyeball with Scissors in the Operation of Strabismus. Read by Dr. H. DERBY, Boston.

The first case was that of a young man, on whom an operation for strabismus had been attempted. The surgeon inadvertently picked up a pair of sharp-pointed scissors. The point of the scissors suddenly penetrated the eyeball, and a portion of vitreous equal in size to a cherry-stone escaped. The operation was abandoned, and Dr. Derby was called to see the case. The eye was bandaged and the patient put to bed. Several attacks of inflammation supervened, but the patient was discharged on the forty-first day, with V $= \frac{7}{10}$.

In the second case the scissors also entered

the sclerotic, but after a somewhat tedious convalescence the wound was found closed on the twenty-first day, with vision as good as before the operation.

Dr. Knapp stated that he had done three thousand squint operations, and in three cases he had punctured the sclerotic. He, however, completed the division of the muscle, and the patients recovered as readily as from an uncomplicated operation.

Dr. Mittendorf stated that he had been present at a strabismus operation where the sclera was opened. He advised the surgeon to complete the operation. This was done, and the wound healed in four or five days. He thought that in case the accident happened, the division of the muscle should be completed.

Dr. E. Williams, of Cincinnati, reported a case in which he had punctured the eye. The patient recovered without difficulty.

Strabismus: its Correction when Excessive and in High Degrees of Amblyopia. By Dr. E. E. Holt, Portland, Maine.

The writer had employed advancement of the weakened, attenuated muscle, in connection with tenotomy, in certain cases of squint, and after tenotomy alone had failed to correct the deviation. He also exhibited an apparatus he had devised for showing the associated and accommodative movements of the eyes and the effects of tenotomy and advancement of the muscle in correcting squint.

The Treatment of Strabismus Internus. By Dr. W. W. Seely, Cincinnati.

He combated the idea that crossed eyes never become straight without an operation. Nothing is better established than the relation between ametropia and strabismus, and all recognize the necessity for glasses to prevent the recurrence of the squint after tenotomy. Every one knows that it is possible to correct the squint by setting aside the ametropia by means of glasses.

He said, "My early conviction that something should be left to time and glasses has long since grown into an absolute law of action, for I have become thoroughly persuaded that immediate perfection meant, later in life, insufficiency or even divergence.

"Operative procedures should not be the first consideration, but should be looked on as an adjuvant to be resorted to later on, if necessary."

He summed up as follows:

"1. That, with our present light, routine operative interference is wrong.

"2. That thoroughly to correct the deviation in young children by operative interference is extremely liable to subject them in after-life to insufficiency or external squint.

"3. That a later period of life, if anything, favors better results from operative interference."

Dr. Knapp thought advancement a dangerous operation. He had always been able to correct the deviation by two or three tenotomies and (if necessary) stitching the eye to the commissure.

Dr. Theobald, of Baltimore, endorsed Dr. Knapp's views in reference to advancement. He was surprised at the conclusions of Dr. Seely. Squint-operations in his hands had been very satisfactory. If postponed, they are likely to prove unsatisfactory on account of the amblyopia which is liable to develop.

Dr. O. F. Wadsworth had studied the subject for a long time, and had convinced himself that amblyopia from squint did not occur. The ability of the patient to use the vision which he has does seem to be lost by a continuance of the squint, but it may be recovered by practice. If the examination of vision were carefully made, he was certain that it would be found that the vision was not improved after the operation. It, however, is often difficult to get the full amount of vision which a squinting eye possesses.

Ectropion of Both Lids; Blepharoplasty by the Italian Method. By Dr. R. H. Derby, New York.

The displacement of the lids was the result of cicatricial tissue from a severe and extensive burn of the face. The lids were loosened from their attachments, and the new lids formed from flaps raised from the arm. The arm was bound to the head by water-glass plaster, and the pedicle was not divided until union had taken place.

Dr. Hasket Derby exhibited a box of trial lenses made by Nachet, in which the following features were embodied:

1. The doubling of the prisms.

2. The distinguishing of the cylindrical lenses by coloring the positive settings black and the negative red.

3. The adaptation of the trial-frames to receive the glasses without removal from the patient's head.

4. The removal of the handles from the prisms and cylindrics.

Plastic Operations without Pedicles. By Dr. B. Joy Jeffries, Boston.

The object of the paper was to make one or two suggestions which the author had not yet put in practice, but which he was ready to try when opportunity offered. He suggested the use of the prepuce from the circumcision of Jewish children for operations about the eyes. He also suggested that in plastic operations the desired result might be obtained without the use of a flap by employing carbolized-oil dressings to retard healing, for it is well known that some time after a plastic operation the transplanted tissue has almost entirely disappeared.

EVENING SESSION.

Dr. Harlan, of Philadelphia, reported two cases of congenital paresis of the external rectus.

Dr. Harlan also exhibited and described Borhek's sphero-cylindrical lenses.

The Removal of a Bit of Steel from the Lens with the Electro-Magnet. By Dr. J. L. MINOR, New York.

M. S. was struck, one week before coming under observation, by a piece of steel. There was a small scar in the cornea, and vision was much reduced. There was clearly a piece of steel in the lens, which the doctor desired to remove at once. After consultation, it was thought advisable to await the development of some symptoms. The patient was, therefore, given atropine, and instructed to return if the eye gave any trouble. Some time later the eye became irritable, there was considerable ciliary injection, there was haziness, and the tension was increased. Cocaine was employed and iridectomy performed. The shank of a strabismus-hook was touched to an electro-magnet, thus making it a magnet. The extremity of the hook was then carried into the lens, and the piece of steel at once attached itself to it and was removed. Thirteen days later the eye had recovered from the operation. The lens has not yet been removed.

Malformation of the Upper Lid. By Dr. R. H. DERBY, New York.

In this case there was a fissure of the upper lid, from the angle of which a portion of skin projected in a peculiar manner.

Removal of Epithelioma of the Eyelid by Applications of Benzole and Calomel. By Dr. A. MATTHEWSON, Brooklyn.

O. D., laborer, 50 years of age, was seen October 30, 1881, with tumor on the right lower lid. This first appeared as a warty growth three years previously. Of late it had been rapidly growing, and presented a raw granulating surface. Careful examination by an expert showed it to be undoubted epithelioma. It was treated by frequent dustings of calomel, after brushing the surface with benzole. The tumor entirely disappeared until a few months ago, when a granular spot appeared at one edge of the site of the former growth. This disappeared under a renewal of the same treatment.

Lipomatous Ptosis. By Dr. H. S. SCHELL, Philadelphia.

Under this head the speaker reported four cases of ptosis from excessive accumulation of fat in the upper lids. The condition occurred in young women between the ages of eighteen and twenty-five. The deformity was symmetrical, the weight of the lid causing it to cover one-half of the cornea. The excessive fat was removed through a horizontal incision. The smallest amount taken away was thirty-five grains; the largest, seventy-one grains. The levator regained power in from one to four weeks. In one case it was necessary to repeat the operation.

Clinical Observations. By Dr. L. WEBSTER FOX, Philadelphia.

Case I.—Congenital cataract in both eyes successfully operated on in a patient 60 years of age.

H. H., a negro, aged 60, presented herself at the Germantown Hospital February 4, 1884. Congenital cataract of both eyes was found. The use of a four-grain solution of atropia produced no dilatation of the pupils; there was simply light-perception. Shortly afterwards the right lens was removed, and the wound rapidly healed. At the end of eight days the patient could see, but could not name objects without touching them. The lens of the left eye was subsequently removed. The effect of the acquisition of sight after sixty years of blindness was carefully described by the doctor. The lenses, when removed, were found to be of a spheroidal shape; the optic nerve presented an oval outline.

Case II.—Recovery of useful vision after eighteen years' blindness.

R. L., aged 37 years, was injured in the left eye when three years of age. Two years subsequently sympathetic ophthalmia developed in the right eye, resulting in qualitative perception of light only. An iridectomy was done at the Germantown Hospital in June, 1884; the media were found to be clear. When admitted to daylight, complained of erythropsia to such an extent that dark glasses were ordered. This disappeared in the course of three months. A +10 D spherical glass was ordered for distant use, and a +14 rendered near objects visible. Subsequent examination showed that better vision was obtained by a combination of spherical and cylindrical lenses.

The remaining portion treated of the history and treatment of five cases of retinitis pigmentosa by electricity (constant current).

There was marked improvement, which in one case remained nine months after discontinuance of the treatment. Five cells are usually employed, the positive pole being placed over the closed eyelid and the negative pole at the nape of the neck.

On the Pulsating Variations of Intraocular Tension as Measured by the Manometer. By LUCIEN HOWE, M.D., Buffalo, New York.

In calling attention to the variations of intraocular tension, some attention also was given to various forms of manometer, or instruments

for its measurement. The earlier forms consisted simply in a U-shaped tube of glass connected by a flexible tube to a trocar. When the trocar was introduced into the anterior chamber of the eye, the intraocular pressure would tend to force the fluid through the tube and show the degree of pressure by a rise in the opposite column of the U-shaped tube. This was imperfect, for the reason that when the aqueous humor escaped from the eye it was at once in an abnormal condition. The double manometer described by Grasser and Holzke obviated this difficulty. In this, however, there was an imperfection in the trocar, which was rather complicated and liable to get out of order. An improvement was accordingly suggested, in having a stop-cock attached to a needle of the hypodermic syringe, and this the writer found to serve the purpose much better than any other. The animal best adapted to this class of experiments is the cat, on account of the deep anterior chamber.

In the earlier experiments with the manometer it was noticed that the intraocular tension varied with the heart's action. In addition to this, the writer called attention to the fact that these variations in the pressure, as indicated by the manometer, correspond to pulsations which can be seen by the ophthalmoscope in the vessels in the interior of the animal's eye. In other words, if the same thing holds in the human subject, we must infer that when pulsation is seen in the interior of the eye there is also a variation of intraocular tension, although not enough to be detected by the touch or by an ordinary instrument. This connection between pulsation and pressure is a demonstration of the cause of venous pulse in the eye, as explained by Donders. It was also observed that after the introduction of the needle there was at first considerable pulsation, but after a short time this ceased, the eye evidently adjusting itself to the unusual condition. The experiments referred to were made in the laboratory of Prof. Zunzt, of Berlin.

Nine Successive Cases in which the Electro-Magnet was used for the Extraction of Chips of Iron from the Interior of the Eye. Reported by Dr. H. KNAPP, New York.

These cases were operated on during the past three and a half years. In two the chip of iron was located in the iris, in one for two days, causing inflammation, and in the other for seventeen years, remaining quiet until recently. Both were successfully removed without deterioration of the eye.

In the seven remaining cases the foreign body was in the vitreous, had produced cataract, and could not be seen. In three cases the attempt to extract them with the magnet failed, and the eyes had to be enucleated. In four cases the chips of iron were brought forth at the first, second, or third introduction of the tip of the magnet. In all these four cases the recovery was smooth. All four are still cataractous. In two the form, size, and tension of the globe were not changed, and the perception of light is good over the whole field. In the two others the globe is slightly smaller and softer, and the field of vision defective, corresponding to the wound made for the extraction of the foreign body. There was no irritation in any of the four eyes as long as they were under observation.

The Actual Cautery in Destructive Corneal Processes. By Dr. H. KNAPP, New York.

The doctor cited a number of cases in which its use had been of service, and considered it a valuable measure.

Dr. Howe had employed this measure in three cases, and the corneal ulcer has been somewhat lessened.

Dr. E. Williams, of Cincinnati, had for the past fifteen years been in the habit of treating phlyctenular ulcers of the cornea by the application of pure carbolic acid, and had found it to act admirably.

Dr. O. F. Wadsworth had for several years been in the habit of using carbolic acid for ulcus cornea serpens and for sluggish, painful infiltrations of the cornea. In sluggish infiltration the application is preceded by scraping, and in some cases the simple scraping has been sufficient. When the ulcus cornea serpens had been severe, he did not recall that it had entirely stopped the process. In a recent case, in which the acid was applied at the beginning of the affection, three applications checked the disease.

THURSDAY MORNING.

Pneumophthalmos, or Air in the Vitreous Humor. By Dr. W. F. MITTENDORF, New York.

The entrance of air into the interior of the eye will occur at times during an operation, —as, for instance, a cataract-extraction. In such cases the air may get into the anterior chamber, whence it can be removed with ease. It is, however, entirely different when air gets into the vitreous chamber. Fortunately, this accident is of such rare occurrence that so far no description of it has been given. The writer had seen two cases of this kind within the last two years. Both occurred in connection with injuries caused by the entrance of foreign bodies into the interior of the eye. Such accidents are usually so serious that any complication of them becomes a matter of great interest. The first case was that of a young blacksmith who was wounded by a piece of iron penetrating the sclera and lodging in the vitreous humor. The foreign body, surrounded by a clot of blood, was found at the bottom of the eye. Behind the lens and a little above it three air-bubbles were seen by means of the ophthalmoscope. These appeared to be of the

size of a small pea, the smallest about as large as a rape-seed. They closely resembled the air-bubble as seen under the microscope, their centres being bright and the outlines well defined and surrounded by a sharp black border. Their recognition was not difficult. The foreign body could not be removed with the magnet, and it was decided to allow it to remain. The eye was carefully bandaged, and the day following it was found that the air-bubbles had coalesced and were seen at the posterior pole of the lens, the patient having remained quietly on his back some time before the examination. While he was in the upright position the air began to rise slowly until it reached the upper part of the vitreous chamber. During this trip the bubble looked oval and decidedly pointed at its lower portion, resembling oil-globules as they are seen ascending in water. Forty-eight hours after the accident every trace of the air-bubbles had disappeared.

The second case reported was the result of a drilling accident. A pretty large piece of stone or iron had perforated the sclera at the lower and outer part of the eye. In the semi-transparent vitreous an air-bubble of the size of a hemp-seed could be seen distinctly.

In order to determine the exact appearance of air in the vitreous, the writer experimented upon rabbits' eyes. Four of them had air introduced into the vitreous humor by means of a hypodermic syringe, and four were subjected to the introduction of oil, also by means of the hypodermic syringe. Nearly all these experiments were successful. The difference between the air- and the oil-bubble was so marked that they could be readily diagnosticated by means of the ophthalmoscope. The latter were more highly refractive, heavier in appearance, and the contour decidedly darker than the air-bubbles, which were entirely colorless.

The conclusions reached by the author were as follows:

1. The entrance of air into the vitreous body can occur only after a part of the contents of the vitreous chamber has escaped.

2. It is favored by the entrance of a foreign body which makes a large, gaping, irregular wound of the sclera.

3. In order to allow air to enter the vitreous humor, this must either be quite fluid or its anatomical arrangement must have been disturbed by the entrance of a foreign body, or the air must have been attached to the foreign body and be thus carried with it into the eye.

4. The air in the vitreous humor appears like an air-bubble, as seen under the microscope. It is more or less round, highly refractive in the centre, and has a sharply-defined black outline.

5. Oil-globules in the vitreous present a similar appearance, but they look heavier, are not perfectly colorless, and their outlines are darker; they are also more glittering in the centre.

6. Air-bubbles will be completely absorbed within two or three days; their presence is not a source of great danger to the eye. Oil-globules last longer, but they are likewise non-irritating.

A Case of Tubercle of the Iris. By MYLES STANDISH, M.D., Boston.

The patient was a girl, 14 years of age. There was no evidence of inherited syphilis. During the past winter she suffered with intense pain in the epigastrium and ascites. The eye-trouble had existed four weeks before coming under observation; there had not been much pain or photophobia. The iris was attached by its pupillary margin to the capsule of the lens. There was a growth —two millimetres in diameter, pink in color —projecting from its surface near its ciliary border.

In the course of a month the growth had doubled its size, the conjunctiva and iris remaining perfectly clear. Other growths made their appearance, and, after consultation, the eye was removed.

The vitreous, retina, and choroid were normal; the lens was somewhat opaque; the iris was very adherent to the capsule of the lens. There were four growths: the largest was two and a half millimetres in diameter at its base, and was two millimetres in height. At the top its diameter was four millimetres: this was apparently due to the pressure of the growth against the cornea. Giant-cells and bacilli tuberculosis were found under the microscope.

Dr. Knapp had seen growths presenting exactly the same appearance, which had disappeared under the use of specific treatment with mercury, even where there was no evidence of syphilis. He had never felt warranted in making the diagnosis of tubercle in such cases, although the presence of the tubercle-bacilli in this case would seem to confirm the diagnosis.

A Case of Congenital Coloboma of the Iris, Choroid, etc. By Dr. C. J. KIPP, Newark.

The patient was a woman, 69 years of age. She was first seen four years ago. There were at that time no inflammatory symptoms, but a small triangular coloboma of the iris was found exactly in the vertical meridian; the tension was above normal. The patient had never seen with this eye, but it had never given pain. Four years later the patient was again seen, and the eye presented the signs of inflammatory glaucoma. The pain had prevented sleep for many weeks. The eye was enucleated, and healed promptly. There was also found a large ectasia of the sclerotic, and over this the choroid and retina were wanting. The ectasia extended close to

the optic papule. There was also a deep, kettle-shaped excavation of the optic nerve.

Coloboma of the Choroid on the Temporal Side. By Dr. S. D. RISLEY, Philadelphia.

A young physician consulted Dr. Risley for asthenopia. There was a considerable degree of myopia in the left eye. In the right eye vision was much diminished. The ophthalmoscope showed a large hiatus in the choroid on the temporal side, the depth of which was 3 D.; there had been no pain. The speaker thought that these cases were comparatively rare.

Dr. Mittendorf had seen several of these excavations in the outward direction. Where the coloboma was so deep, he thought that it was probably a coloboma of the optic-nerve sheath with excavation of the nerve. A difference of 4 D. would indicate a greater defect than would answer to absence of choroid and retina alone.

Serous Effusion in the Vitreous due to Malaria. By Dr. W. W. SEELY, Cincinnati.

The speaker considered the occurrence of this complication not infrequent, and he reported one case of this affection.

Gray Degeneration of the Optic Nerve, with Abnormal Patellar Reflex. By WILLIAM F. NORRIS, M.D., Philadelphia.

After an elaborate review of the literature of the subject, the speaker gave the results of his observations in cases in which the patellar reflex was increased or diminished. He described three cases of gray degeneration associated with tabes dorsalis which had come under his observation. While he did not hold that this symptom indicated beginning tabes dorsalis, yet it was a danger-signal calling for rest of the brain and cord, with attention to improvement of the general condition.

A Case of Double Optic Neuritis and Ophthalmoplegia from Lead-Poisoning complicated with Typhoid Fever. By C. F. WADSWORTH, M.D., Boston.

A boy 9 years of age had suffered from obscure febrile symptoms for several weeks, and movements of the left eye had been observed to be imperfect. When first seen by Dr. Wadsworth there was pronounced optic neuritis in both eyes. The rest of the fundus normal. Vision was much diminished. No lateral movements of left eye could be made, and movement downward was impaired; the outward movement of right eye was defective. The probable diagnosis was tumor in the region of the pons.

The movements of the eyes became still more impaired, and vision sank. The boy developed pretty distinct symptoms of typhoid fever. The spleen and liver were both enlarged. Lead was found in the urine, and the diagnosis of tumor was then abandoned. The treatment was with iodide of potassium. The general condition gradually improved; the neuritis passed into atrophy, leaving too little vision to count fingers; the movements of the eyes were completely restored, and the lead disappeared from the urine. The cause of the lead-poisoning was found to be the presence of a piece of lead-pipe in the cistern from which the drinking-water was obtained.

Olive Oil as a Menstruum for Dissolving Cocaine for Application to the Eye. By JOSEPH A. ANDREWS, M.D., New York.

In addition to the occasional benefit from the use of oil dropped into the eye in recent abrasions from burns and in other painful affections of the cornea in which atropine is indicated, cocaine may likewise be serviceable. The plan of dissolving the cocaine in oil seems to insure a longer contact of the remedy, and a smaller quantity is required to effect anæsthesia,—two qualities of especial advantage in operations on the eye.

Neither the salt of cocaine nor of atropine is soluble in olive oil; but the alkaloids of both dissolve readily in the menstruum without the addition of an acid, it being only necessary to expose the solution for a few minutes to a gentle heat in a water-bath. Castor oil is not a desirable menstruum, on account of its irritating qualities, and the oleate of cocaine, for the same reason, is still more objectionable as an application to the eye.

A Case in which Enucleation of the Eye for Glaucoma had precipitated Glaucoma in the Other Eye. By Dr. DAVID WEBSTER, New York.

The patient was a man of 54, the subject of glaucoma absolutum. He complained of periodical obscurations of vision in the good eye. V = $\frac{20}{15}$, and there was no limitation of the visual field. As he was of dissipated habits, he was advised to live properly. A week or two later he returned, stating that he had had a worse attack. There was an excavation of the nerve in the good eye detected. The glaucomatous eye was now removed. Two days later, acute glaucoma appeared. An iridectomy was performed, and he recovered in a week or two, with V = $\frac{20}{20}$, with no cupping of the disk and no limitation of the field. This was the only case he knew of in which enucleation had precipitated an attack of acute glaucoma in an eye already predisposed to it. He had, however, reported cases in which iridectomy had produced the same effect.

Quinine Amaurosis. By Dr. E. WILLIAMS, Cincinnati.

The speaker reported two cases. In the first case a man took about one ounce in the

course of four days. This produced total blindness and deafness, but in six weeks he could see as well as ever. The hearing had never completely returned, although the quinine was taken eight years ago. The field of vision was concentrically contracted in both eyes. The optic disks were found to be very white, the calibre of the arteries and veins was reduced, and the smaller capillaries could not be seen.

The second case was that of a boy of 14, who had received large doses of quinine, the exact amount not being known. He was totally blind for four days. When examined, the sight was much diminished and the atrophy of the optic disks was extreme, and there was great contraction of the field of vision.

A Means of Measurement of the Amount of Anæsthesia from Cocaine. By Dr. LUCIEN HOWE, Buffalo.

The doctor exhibited the drawing of a kymograph which he had used for this purpose. The use of the instrument was based on the fact that irritation of a sensory nerve is followed by a rise of blood-pressure. The instrument is connected with an artery, and the conjunctiva is irritated. Cocaine may then be applied and the results on the blood-pressure compared.

Dr. Harlan, of Philadelphia, presented a modified ophthalmoscope, which had been devised by Dr. Jackson, of Philadelphia. In it the lenses moved vertically instead of circularly.

Dr. Dennett, of New York, exhibited an arrangement for using Stokes's lens for measuring astigmatism, and to avoid the inconvenience of constantly removing the frame from the patient's nose. The lens was mounted on a stand, and could thus be placed in front of the patient.

The Society then went into executive session.

The officers for the following year are as follows:

President.—Dr. William F. Norris, Philadelphia.

Vice-President.—Dr. Hasket Derby, Boston.

Secretary and Treasurer.—Dr. O. F. Wadsworth, Boston.

Corresponding Secretary.—Dr. J. S. Prout, Brooklyn.

New members were elected as follows: Dr. Charles A. Oliver, Philadelphia; Dr. Edward Jackson, Philadelphia; Dr. B. Alexander Randall, Philadelphia; Dr. D. Pope Walker, New York; Dr. William O. Moore, New York; Dr. Frank G. Capron, Providence; Dr. S. M. Burnett, Washington; Dr. William T. Bacon, Hartford.

The next meeting will be held at New London, the third Wednesday in July, 1886.

W. H. M.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held June 10, 1885, the President, JOHN A. WYETH, M.D., in the chair.

EXSECTION OF THE KNEE.

Dr. J. H. RIPLEY presented an Italian, 28 years of age, who had been well until four years before his admission to Charity Hospital, September 14, 1882. He had suffered for a year from a hot and painful left knee, which was considered rheumatism. This attack ceased of itself; but, four years later, he slipped on a banana-peel, fell, and injured the left knee, which immediately swelled to twice its natural size, became very hot and painful, and he was conveyed to Charity Hospital. Here he was treated in the medical ward for three months for rheumatism, when he was transferred to the surgical ward, where extension was employed for some time, together with local and general treatment. Extension being discontinued, a plaster-of-Paris splint was applied. Finally, Dr. Ripley decided to exsect the joint, although crepitation could not be heard and the surgeons present were in doubt whether the operation should be done. The bones were found to be extensively diseased, and to have removed all the diseased portion would have necessitated the taking away of a portion of the shaft of both bones. The patient, however, made a good recovery and had good use of the limb.

The case was interesting from the fact that the patient had suffered for nearly three years with an inflamed joint, there being no suppuration and no crepitus. The absence of crepitus was found to have been due to the fact that contiguous portions of the opposing bones were not roughened. It was further interesting as showing to what extent disease of the bone could go and end in repair; also in the fact that it illustrated the great difficulty of extracting the binding-wires. Dr. Ripley had had a similar case in a girl about ten years ago, but there recovery was more protracted, because the bones had not been put up immovably.

The PRESIDENT said the case also illustrated the great advantage of excision over the old method of treatment by amputation. The books told us that about twenty-five per cent. of patients died after amputation, whereas he had not, during an observation of six or seven years of the treatment by excision, seen a single case of death. As to the use of wires, he thought they were altogether unnecessary; but, if they were employed, they might be allowed to remain, for their presence did no harm.

ULCERATIVE ENDOCARDITIS.

Dr. RICHARD VAN SANTVOORD presented the heart of a man, aged 46 years, whose

father had died suddenly, of an unknown cause, and whose mother had died suddenly of heart-disease. The patient had had measles, scarlatina, smallpox, primary chancre, and had been a hard drinker. When admitted he was suffering from rheumatism. The feet were swollen at night. Irregular exacerbations of temperature and rheumatic attacks continued for some weeks, and he died of exhaustion. There had been failure of memory. The autopsy showed pachymeningitis hæmorrhagica, with general thickening and opacity of the membranes, and the viscera showed some of the signs of chronic alcoholismus. The chief interest centred in the heart. There were remains of old pericarditis. The ventricles were somewhat dilated. The gross appearance pointed to fatty degeneration. On two leaflets of the aortic valve were masses of vegetation, each surrounding an ulcer perforating the valve. A third leaflet was atheromatous, and at one spot there was roughening of the inner surface of the heart. On one of the leaflets of the mitral valve was a small mass of vegetation. There was advanced atheroma of the large vessels. The sphygmographic tracing was that said to be characteristic of aortic regurgitation with atheromatous arteries. A correct diagnosis had been hardly possible in the patient's condition. Aortic and mitral regurgitant murmurs had been recognized. While a systolic murmur at the apex was supposed to indicate mitral regurgitation, he thought it was a recognized fact that this murmur was frequently heard in aortic regurgitation, or it might be due to meeting of conflicting blood-currents in overdistention.

CONGENITAL MALFORMATIONS.

Dr. A. JACOBI presented a boy, aged 7, who showed the following malformations: on the left hand were but three fingers, the index and little fingers, with their corresponding metacarpal bones, being absent. The left ulna was fourteen centimetres, and the right one sixteen and three-quarter centimetres long. The left elbow-joint was imperfectly formed, interfering with perfect supination. The lower extremities presented symmetrical formations except in the following respects: the left foot was smaller and about half an inch shorter than the right; the right thigh was about four centimetres longer than the left, and the movements of the right foot were much freer than those of the left; the patella was absent on the left side, and was imperfectly formed on the right side. The length of the left leg was twenty-seven centimetres, and of the right twenty-eight centimetres; on the left foot the second and third toes were slightly raised. The face and the head were nearly symmetrical. The chest was slightly rachitic. The child was able to walk, and when in the erect posture the thighs presented forward and slightly outward.

His sister, 3 years old, was also presented, and showed congenital deformities of the right leg and foot. The tibia presented an anterior curve, and at about the junction of the lower with the middle third was a longitudinal scar half an inch in length. The foot was strongly everted. The fibula was absent. There were but two toes,—the big toe and another which seemed to be the union of two. The latter articulated with two metacarpal bones. It was impossible to bring the leg into a straight line with the thigh, either because of the action of the posterior muscles of the thigh or because of some abnormality in the formation of the knee-joint. When extended as far as possible, the leg turned outward. The right leg was shorter than the left by one and a half inches, being eleven inches long. There seemed to be no anterior tibial artery on the right leg. The right foot was shorter and smaller than the left. As to the bones entering into the formation of the tarsus, it was impossible to state with certainty, but the cuneiform bones seemed to be absent. The right patella seemed to be smaller than the left, and was placed external to its normal position.

Dr. JACOBI had seen several cases of congenital absence of a long bone, and he believed it was the rule, as in this case, to find a scar, the result probably of an injury before the complete formation of the skin during intra-uterine life.

VOLVULUS OF THE SIGMOID FLEXURE.

Dr. FRANK FERGUSON presented a dried specimen illustrating volvulus of the sigmoid flexure, that portion of the gut being largely distended and discolored from hemorrhage into its substance. The gut had made a complete turn upon itself, preventing the passage of the contents of the bowel. The remainder of the colon was also largely distended. The patient had often had attacks like the one which proved fatal, which after a time disappeared. The last attack commenced with a chill; soon nausea and vomiting with severe abdominal pain developed, resulting in death about the fourth day, and a few hours after admission to the hospital.

Dr. WALDSTEIN had frequently noticed at autopsies in aged fat subjects great distention of the colon, with almost complete turning of some section, but not to the full extent of causing obstruction.

DERMOID CYST NEAR THE COCCYX.

The PRESIDENT presented a tuft of hairs about the size of a small camel's-hair pencil, which he had removed from a position just posterior and outside from the coccyx, in a man 22 years of age. The patient, eighteen months before, had had a boil, which had burst and left a fistulous tract near the anus,

and this fistulous tract communicated with an abscess-cavity, which Dr. Wyeth opened. His attention was then directed to a pimple looking like a comedo, into which he inserted the probe, and found that a canal led to a small cavity containing the tuft of hairs presented. It was doubtless a dermoid cyst, and he believed was unique in this situation.

Dr. FERGUSON mentioned two cases of congenital cyst over the sacrum, containing ciliated epithelium and cholesterin. He was unable to explain their development in this locality.

Dr. JACOBI suggested that Dr. Ferguson's cases may have sprung from the remains of an early spina bifida.

REVIEWS AND BOOK NOTICES.

LIFE OF FRANK BUCKLAND. By his Brother-in-Law, GEORGE C. BOMPAS. With a Portrait. Philadelphia, J. B. Lippincott Co. Cloth, 8vo, p. 433.

This work is largely autobiographical, since it is made up principally of extracts taken without change from the diary of the eminent naturalist himself. Earnestness, simplicity, cheerfulness of disposition, devotion to duty, and an unaffected desire to be useful to others are everywhere evident in this Life.

Upon commencing the study of his profession at the age of twenty, he makes the following entry in his note-book: "My object in studying medicine (and may God prosper it!) is not to gain a name, money, and high practice, but to do good to my fellow-creatures and assist them in the hour of need. My object in life is to be a high-priest of nature and a great benefactor of mankind." This was the key-note of his life.

Finding the salmon-fisheries of England nearly ruined by the obstructions and pollutions of rivers, he subsequently devoted all his time to the study of fishes, and to the means of increasing this important source of food-supply. He was successful in having laws passed for the protection of the salmon, and he was highly gratified by his appointment as one of the government inspectors, a position which he held until his death in 1880. He was an ardent student of the art of pisciculture, and it was his devotion to this pursuit, requiring frequent wading in ice-cold water while collecting salmon-eggs in the winter, which finally caused hemorrhages, followed by rapid failure of health and untimely death. He organized an Acclimatization Society in England, the object of which was to find out new kinds of food and to multiply old ones. His experiences with tiger steak, hippopotamus pie, rhinoceros stew, lion roasts, and kangaroo hams are recorded in graphic terms. Horse-meat he pronounced "not good," but field-mice properly roasted were highly commended. He did not seem to think that his knowledge of an animal was complete until he had cooked and eaten it.

Dr. Buckland rendered a service to medical science in searching with characteristic energy for and discovering the casket of John Hunter at St. Martin's Church. His quickness of observation appears in many ways. He went to see a magnetic exhibition at Cremorne Gardens, and pronounced it a great humbug. He said, "The people go determined to believe what they see."

His pursuit of knowledge more than once nearly cost him his life. In examining a rat which had been struck by a cobra, he gently scraped the punctures made by the fangs with his finger-nail; as a result, he was in a few moments profoundly affected by absorption of the poison, and his life was only saved by liberal use of ammonia and alcohol. Indeed, it is surprising that he had not suffered long before from snake-bite, as he usually had his pockets full when at school, where his escaped adders often led to an uproar. His fondness for animal pets made him convert his house in Albany Street almost into a menagerie, and often got him into trouble with his neighbors.

This is the record of the busy life of one who served his generation well, and, as such, it teaches a useful lesson. An enthusiastic and sympathetic student of nature, in which he gladly recognized the many evidences of design, he frequently bore testimony, both in his lectures and in his writings, to the harmony existing between the truths of science and revealed religion.

A MANUAL OF THE MEDICAL BOTANY OF NORTH AMERICA. By LAURENCE JOHNSON, A.M., M.D., Lecturer on Medical Botany, Medical Department of the University of the City of New York, etc. New York, William Wood & Co., 1884. Wood's Library.

This admirable treatise is devoted to the consideration of our indigenous medicinal flora. It has been carefully prepared, and is abundantly illustrated by numerous cuts and nine full-page chromo-lithographic plates. The author has displayed judgment and skill in compiling this manual, which is full of useful knowledge.

He does not have as high an opinion of Rhamnus Purshiana (or Cascara sagrada) as a laxative as many practitioners have, and he justly advises caution in the use of gelsemium; but he points out many plants of which the properties deserve to be better known than they are. He speaks of drug preparations ordered to be kept in the shops as "official" preparations: surely the older term "officinal" is more correct, and is also official,—*i.e.*, used in the United States Pharmacopœia.

The manual has a good introductory sec-

tion, devoted to an explanation of the general principles of vegetable growth and reproduction, and a glossary of botanical terms.

GLEANINGS FROM EXCHANGES.

The Blood in Scurvy.—Seven cases of uncomplicated scurvy, three of which proved fatal, were last summer under the care of F. Stazevich in the military hospital at Moscow. The blood examined by Lavdovski's osmic acid solution (one per cent.) showed irregular red corpuscles of dissimilar magnitude, also more or less atrophied corpuscles adhering together. After recovery this irregularity disappeared. Two cases died of intestinal hemorrhage, one of hemorrhagic pleuritis. The blood of these was found at the autopsy to be dark and fluid. In the cardiac cavities and large vessels there were either no coagula or they were of a light color and easily torn. In two cases extravasation was found in the pleura, the surface of the heart, and the aortic valves. The spleen was enlarged, light-colored, and easily broken down; the liver enlarged; the cortex of the kidney increased in thickness. The intestinal mucous membrane was soft, swollen, and contained extravasated blood; the solitary glands were enlarged in only one case, and there was likewise ulceration of the colon in only one case; the peritoneal glands were invariably enlarged, and the brain was very anæmic. Under the microscope some of the preparations of the muscles of the buttock showed small extravasations of blood between the fasciculi; the liver-cells were enlarged and cloudy, also the epithelium of the urinary passages; the alveoli of the peritoneal glands were much enlarged, and filled with round cells of the size of white blood-corpuscles. The mucous membrane of the small intestine could scarcely be recognized under the microscope, and the epithelium could not be seen at all. The commencements of the lymphatics were filled with finely granular detritus; the vessels of the mucosa were much distended, and surrounded by extravasations of blood. In places the mucous membrane was detached from the muscular coat, which had a cloudy appearance.—*Lancet.*

Remarkable Case of Double Uterus.—Mr. Lawson Tait, at the meeting of the British Gynæcological Society, May 13, read the notes of a case of double uterus, in which there was pregnancy in the left half, with hematometra in the right. The patient, aged 39, had had twelve children. She came to the hospital three weeks after her last confinement. On examination, a large cystic tumor was found to occupy the abdomen. On handling the tumor, it became tense, in exactly the same way that a pregnant uterus did during rhythmic contractions. On examination, a cervix was met with on the right side of the vagina, but no aperture in it could be discovered. Higher up the vagina, a cervix and os uteri could also be made out, and bimanual examination made it clear that the second organ was that from which the child had passed, and that the tumor and the first cervix together constituted the right half of a double uterus. The nipple-shaped first cervix was perforated, and a large quantity of bloody serum and clot escaped. The cavity was finally washed out with warm water. When the patient left the hospital—on the fourteenth day—the supplementary uterus had contracted to the size of a cricket-ball. The cervix in the vagina had almost entirely disappeared.—*Brit. Med. Jour.*

Opium-Poisoning and Nitrite of Amyl.—Dr. W. L. Johnson, of Giddings, Texas, reports (*Texas Courier-Record of Medicine*, May, 1884) the case of a man who, it was said, had taken two ounces of laudanum three hours before coming under treatment. He was comatose, face and skin cyanotic, extremities cold, and perspiring freely. After two hours' treatment with belladonna and usual remedies, his condition seemed very grave. At this point nitrite of amyl was administered by inhalation for seventeen seconds, when the patient revived and became conscious, the surface of the body became crimson, pulse was restored to the wrist, and, in short, he was entirely and permanently relieved.

[The known tendency to cerebral congestion in opium-poisoning would, as a rule, forbid the use of nitrite of amyl. In this case, however, five hours had elapsed since the laudanum had been taken, and belladonna had been administered before the amyl nitrite was given. The paralyzing action of the amyl upon the pneumogastric and the vaso-motor nerves, and its depressing effect upon the heart, would render it an unsafe agent to administer in narcotic poisoning. Possibly its good effect in this case is to be attributed to the fact that the dose of the opium had ceased to be operative.]

Treatment of Ozæna.—Regarding ozæna as a chronic inflammation attended by atrophy of the nasal mucous membrane, the alteration of the secretions favoring the development of micro-organisms and decomposition, Dr. W. Roth postulates the following indications for treatment: 1. Remove accumulations; 2. Restore the mucous membrane to its normal condition; 3. Remove the cause of the bad odor; and, 4. Relieve attending dyscrasia. He employs a greased tampon of iodoform (ten per cent.) cotton charpie at night, followed in the morning by insufflation of thymol, carbolic acid, chlorate of potassium, alum, or tannin, and appropriate general treatment, with attention to hygiene.—*New Orleans Med. and Surg. Journal; Deutsche Med. Zeitung.*

MISCELLANY.

ONE of the most recent cases of malpractice has just been decided in a New York City Court, and presents some curious features. The action was brought for damages caused by a physician treating a child for three weeks for tubercular meningitis, when the real disease was chorea, or St. Vitus's dance, and by this mistake suffering was caused and the original disease aggravated.

The testimony was very conflicting, but a verdict against the attending physician was rendered, and the Appellate Court, in affirming the judgment, said, in part, "It was in evidence, moreover (though that is one of the questions in conflict), that Dr. O'Rourke, when called in, declared that the child should have out-door exercise and nourishing food, and that in six months she would be able to go back to school, which, if true, was to be taken in connection with the fact that what he prescribed was bromide, to allay the twitching and spasms. It may, therefore, have been that the only disease that she had from the beginning was St. Vitus's dance, and not meningitis in any form, and that the three weeks' daily attendance of the defendant and the thirty to forty dollars expended by the father for medicines during that time was thrown away; and, if this was the case, that it was an inexcusable want of ordinary medical knowledge in the defendant to continue for three weeks treating the child for a disease that was such a serious one, in respect to which—though the defendant, Dr. O'Rourke, declared it curable—Dr. Allen said that he had never known an instance in which a cure had been effected."

The Appellate Court, although regarding the case as not entirely clear, on the testimony decided not to interfere with the original verdict against the physician.

JULY WEATHER.—For the greater part of July a thermal undulation of unusual intensity prevailed in Philadelphia and in other of our Eastern cities. Quoting the local Signal Service report, the highest barometer-reading was on the 23d, 30.18, and the lowest on the 14th, 29.71. The heat was most intense on the 18th, when the thermometer indicated 97° F. at the Signal Station, but 103° in the shade on the street. The lowest record was 56°, on the 1st of the month, before the undulation which appeared on the 5th and lasted until the 27th.

The greatest range of temperature was on the 17th, when the thermometer ran up twenty-four degrees; the least was on the 27th, when it varied only eleven degrees. There were eleven clear days, and the other twenty were noted as fair, although five thunder-storms were recorded. The total rainfall was 2.39 inches.

The mean temperature of the month was almost the same as 1877, and slightly above 1882, but a degree below 1876, the famous Centennial year, when Philadelphia seemed to outdo herself in order to give the world a warm welcome.

THE CREMATION SOCIETIES of the country seem to be increasing in number, and some of those which are open have their facilities pretty well taxed. The Crematory at Lancaster, Pennsylvania, is in use very frequently, and there are a large number of bodies lying in vaults awaiting the completion of the one near New York.

A society has just been formed at Worcester, Massachusetts, and a bill authorizing the formation of corporations for the purpose of disposing of the dead in this way has passed the Legislature of that State.

The recent decision in England that cremation was not illegal has had the effect of creating a number of societies, and one cremation at least has taken place. It certainly appears to be true that this practice is rapidly on the increase, both here and abroad.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 19, 1885, *TO AUGUST* 1, 1885.

MAJOR JOSEPH H. BILL, SURGEON U.S.A.—Died at Yonkers, New York, July 21, 1885.

LIEUTENANT-COLONEL CHARLES MCDOUGALL, U.S.A. (retired).—Died at Fairfield, Virginia, July 25, 1885.

CAPTAIN CALVIN DE WITT, ASSISTANT-SURGEON.—Promoted to Major and Surgeon, *vice* Bill, deceased, to take effect from July 21, 1885.

FRANCIS J. IVES.—Appointed Assistant-Surgeon, with rank of First-Lieutenant, to rank as such from July 25, 1885.

CAPTAIN A. C. GIRARD, ASSISTANT-SURGEON.—From Department of the East to Department of the Columbia.

CAPTAIN R. G. EBERT, ASSISTANT-SURGEON.—From Department of the Columbia to Department of the East. S. O. 170, A. G. O., July 27, 1885.

CAPTAIN F. W. ELBREY, ASSISTANT-SURGEON.—Sick-leave of absence further extended four months, on surgeon's certificate of disability. S. O. 162, A. G. O., July 17, 1885.

CAPTAIN L. S. TESSON, ASSISTANT-SURGEON.—Ordered from Fort Stockton, Texas, to Fort Davis, Texas.

CAPTAIN W. F. CARTER, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort Stockton, Texas. S. O. 90, Department of Texas, July 27, 1885.

CAPTAIN A. H. APPEL, ASSISTANT-SURGEON.—Ordered for duty with U.S. troops forming portion of guard of honor over remains of Ex-President General Grant, at Mount McGregor, New York. S. O. 36, Division of the Atlantic, July 29, 1885.

CAPTAIN WILLIAM C. GORGAS, ASSISTANT-SURGEON.—Granted leave of absence for two months, to take effect about August 10, 1885. S. O. 169, A. G. O., July 25, 1885.

CAPTAIN NORTON STRONG, ASSISTANT-SURGEON.—Ordered for temporary field-duty with battalion Eighth Cavalry, at Hillsboro, New Mexico. S. O. 34, Headquarters District of New Mexico, June 27, 1885.

FIRST-LIEUTENANT EDWARD EVERTS, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Benicia Barracks, California.

CAPTAIN C. K. WINNE, ASSISTANT-SURGEON.—Ordered for duty at Benicia Arsenal, California. Paragraph 3, S. O. 70, Department of California, July 15, 1885. (Modified paragraph 2, S. O. 68, c. s., Department of California.)

PHILADELPHIA, AUGUST 22, 1885.

ORIGINAL LECTURES.

ON ALEXANDER'S OPERATION FOR RETROVERSION OF THE UTERUS.

BY W. M. POLK, M.D.,

Professor of Obstetrics and of the Diseases of Women and Children in the University of the City of New York.

THE patient, gentlemen, who has been brought before you, you will find, as the history is brought out, to be suffering from a condition which is sufficiently common, but for which, unfortunately, we have never been able to devise any means of radical cure. She tells us that she has always had some trouble at her confinements, and her last labor, six years ago, was attended with greater difficulty than any. As a result, she left the lying-in room more or less an invalid. For four or five weeks she suffered with distress referred chiefly to the left side of the pelvis, and there has been until the present time the following train of symptoms. Backache, located in the region of the sacrum, aggravated at the period of menstruation. The menstrual flow has been more profuse than normal, and consequently after it has ceased she feels exhausted rather than relieved by it. Moreover, menstruation has been painful,—not in the sense of acute lancinating pain, nor of the griping pains often associated with constriction of the internal uterine os with retention of the menstrual fluid, but rather an increase of the backache and of the sense of pelvic fulness. She also suffers at this time from a good deal of pain extending down the limbs. Further, constipation more or less troublesome has been present during her illness, more pronounced during menstruation than at other times. In addition to these symptoms the patient has suffered more or less from headache; but this we have not been able to connect directly with the pelvic disorders. If you will recall cases which you have seen in the amphitheatre the past winter, you will remember that now and then we were able to associate the headache, from which these patients sometimes suffered, with derangements of the pelvic organs. But in the case of this woman we are not able to trace any such direct relationship, but the other symptoms seem to depend directly upon the conditions which exist in the pelvis.

This patient has had the usual leucorrhœa. I say usual, because nearly all women who have the train of symptoms here presented have a certain amount of leucorrhœal discharge, generally more profuse within the first five or six days after menstruation.

We are unable to arrive at a diagnosis from the symptoms narrated. In fact, I may say that in the majority of the complaints which are due to changes in the pelvic organs the general symptoms afford us but little positive information as to the exact condition of those organs. We can arrive at a definite conclusion only by a careful physical examination. That is a fact which I wish to impress upon you, especially those of you who are less advanced in your studies, because you may find it difficult, owing to the natural modesty of women, to induce them to submit to the examination necessary for a correct diagnosis. You should give the patient to understand that, while far from insisting upon a physical exploration, at the same time such an investigation is necessary to arrive at a positive diagnosis, and that if you prescribe without making such an examination the treatment is based upon guess rather than upon certainty. In pursuing this course you will find that the large majority of women will sooner or later arrive at your view and be willing to aid you in every way to arrive at a correct conclusion.

Our chief reliance in making a physical examination of the pelvic contents is bimanual palpation. Sometimes inspection is necessary; but we are able to make a diagnosis in this case by the aid of bimanual palpation alone. Placing one hand upon the lower part of the abdomen and introducing the finger of the other into the vagina, I find the uterine body in Douglas's cul-de-sac, and between the cervix and this body is an angle, indicating that the organ is retroverted and retroflexed. The sound, when passed into the uterine canal, reaches to a distance about one-fourth farther than it would have done in the organ of normal size.

What we have here is a uterus, about one-fourth larger than when in its natural state, forced down into Douglas's pouch,

pressing upon the rectum, therefore interfering with the proper evacuation of the bowel. The organ being still more markedly increased in size during menstruation, presses then more directly upon the surrounding organs, and more or less directly upon the nerves passing through the sacral foramina to be distributed to the limbs, consequently giving rise to increased pain in the limbs. The constant passive congestion of the pelvic organs is added to at the menstrual period, and the flow is greater than it would be were the pelvic organs in their normal state. The headache from which the patient suffers might also be due to some displacement and congestion of the ovaries, an accompaniment of the retroversion of the uterus. Such a condition of the left ovary would be more likely to give rise to that symptom, inasmuch as it is located in front of the distended rectum, where it would be exposed to pressure. But, without speculating with regard to the possible effects produced by this dislocation of the womb, it is evident that there are sufficient symptoms caused by it to render the woman's life practically miserable, and to interfere with her household duties (of which she has many), and she needs some efficient treatment for her relief. We have for a long time tried to relieve her by cotton pledgets soaked in glycerin and menthol, and have also endeavored to secure benefit from the pessary; but she is unable to wear any such instrument, because of the pain and tenderness. This being the case, we propose to-day to do Alexander's operation, which consists in exposing the round ligaments at the external ring, and drawing them out through the ring, thus lifting the uterus. We then secure the ligaments near the external ring, so as to fix the uterus in its new position,—one of anteversion rather than of retroversion.

Let us briefly recall the relations of the round ligaments to the uterus, in order that we may see what will be the effect of shortening or drawing the ligaments through the inguinal canal. These ligaments take their origin in the cornua of the uterus, on each side. From this point they pass out along the upper—or, more accurately speaking, along the anterior—fold of the broad ligament. The highest point in the broad ligaments is the line of the Fallopian tubes and ovarian vessels, and it is just below that line, in the anterior layer of the broad ligament, that you will find the muscular structure called the round ligament, in the form of a loop with its convexity downward. Passing outward, they reach the lineæ terminales about the pectineal eminence; thence passing over the internal border of the psoas muscle, they touch the external iliac vessels, along which they pass to gain the posterior face of Poupart's ligament; ascending thence the internal surface of the anterior abdominal wall to the internal inguinal ring, they pass down the inguinal canal to their attachment outside the external ring.

There is no doubt that in some cases the peritoneum is so closely attached to the structure of the round ligaments as to prevent us from pulling the ligaments through the inguinal canal. The dissections which I have made have taught me this, but the results of operations upon the living subject show that in some cases the ligament moves very freely upon its peritoneal attachment, and can be tightened by traction and the end sewed to the pillars of the external ring. Now, if you will bear in mind the attachment of the round ligaments, you will see at once that in making traction upon them the fundus of the uterus must be lifted upward and forward into the position where, in cases of posterior displacement, it is desired to retain it permanently.

[The following additional remarks concerning the operation in this case were made at the clinic a week later.]

GENTLEMEN,—Alexander's operation, performed upon a patient last Monday at this clinic, proved, so far as the immediate results were concerned, quite successful. I had hardly time then to explain to you all the points connected with the operation, especially regarding the surgical anatomy of the region concerned. The result obtained during the operation was that the ligament was shortened about two inches, its end being stitched to the face of the pubic bone, between the symphysis and the spine, in preference to the loose tissue on either side of the cut surfaces, for the reason that this tissue is in itself yielding, and would therefore be likely to give way, and perhaps in time permit the uterus to return to its former position. We found, after the operation, that the uterus had been lifted bodily out of the pelvis, so that

the fundus was almost in contact with the anterior abdominal wall. You will remember that previous to the operation the organ was markedly retroverted and retroflexed, being well down in Douglas's pouch. Unquestionably, then, the immediate result of the operation was the most radical cure of the posterior displacement which could be devised. The uterus was lifted higher than would have been possible by the use of any pessary.

But the next question which arose was, Would the ligament retain the womb in its improved position? In order to relieve the ligaments of strain by the weight of the uterus, the vagina was partly filled with cotton pledgets, which were thrust so far back into the posterior fossa as to support the uterus in its new position. We then applied the Lister dressings to the wounds, and they were not disturbed until yesterday. I put in a bone drain, for the reason that in this cellular tissue, especially if the patient be fat, there is very likely to be slow union. Union by first intention is not always the rule in places where there is much adipose tissue.

The result found on removing the dressing yesterday was, so far as the left side was concerned, perfect. On the right side there was a slight erysipelatous flush about the edges of the wound, which, however, has nearly or quite disappeared today. There was good union throughout both incisions, and the uterus is in its improved position.

It has been found that these patients must be kept in bed for at least a month in order that the new position of the round ligament may be permanent. At the end of that time the ordinary ring-pessary, or Smith's pessary, may be introduced into the vagina and allowed to remain for a month or two.

A word with regard to the operation itself. In the first place, as to the ease with which you can reach the external ring, nothing is simpler to do than this in the male. You have the cord and its accompanying vessels, which are so prominent that a mere tyro in surgery can reach the ring. But when you come to search for the external inguinal ring in the female, you will find that it is by no means so easy a matter. You know that the ring is immediately above and a little outside of the spine of the pubis, and that when the round ligament passes through this it becomes speedily lost in the connective tissue where the labia majora joins the mons veneris. My directions to you, then, in the performance of the operation would be to make a free incision just a little above and to the outside of the spine of the pubis; go down through the skin and superficial fascia until you strike the conjoined tendon. Having done that, you know you have reached tissue which goes to form the external ring, and it will then be a very simple matter to run your finger along this smooth surface down to the pubic spine, and the moment you reach this point you will feel the hardened, curvilinear edge of the external ring above and outside the spine.

If you attempt to determine the location of this ring, as has been advised, by invaginating the loose skin lying over the labia majora, following out the plan which we adopt in locating the ring in the male, in which case we invaginate the scrotum, you will find that the tissue is not sufficiently loose to permit you to thrust your finger in far enough to reach the ring. But clear away the skin, adipose tissue, and superficial fascia down to the surface of the conjoined tendon, and you will find it just as easy to mark the edges of the external ring in the female as in the male.

Having exposed the external ring, you must not expect to find the round ligament a distinct, well-marked, fibro-muscular band within its limits. You will find that the tissues all look very much alike, especially if you have permitted them to become blood-stained; but in the centre of the ring, passing directly beneath the arch over the canal, you will see some tissue resembling unstriped muscular structure, which is vascular intermixed with fat. Take your forceps, grasp this tissue, make traction upon it, and you will bring the cord into view. It is really the extremity of the cord, which is made up of this muscular tissue, fat, connective tissue, and the extremities of what corresponds to the cremasteric artery in the male. Having made traction upon this tissue and brought the cord into view, you will be able to shorten it sufficiently to raise the uterus.

I am particular in describing these steps in the operation, for the reason that the directions which have been given heretofore for the performance of the operation are not sufficiently clear to enable one to do it readily.

One other point. It seems that after drawing the cord out and stitching it in a new position, it will sometimes slough, and may allow the uterus to drop back, drawing the sloughing end of the cord with it into the abdominal cavity. This sloughing cord being drawn back into its sheath in the peritoneum, which covers it in its passage from the uterus to the internal ring, may give rise to a fatal result.

Whenever sloughing of the divided cord takes place, it must be due to one of two things: either to undue handling or to interference with the nutritive supply. That interference with nutrition may take place is evident when we study the blood-supply of the ligament, which is derived from two sources: the ovarian artery, where it enters the cornu of the uterus, sends one small branch into the round ligament, the analogue of the spermatic artery in the male. This vessel is quite small, but it seems to answer the purpose of furnishing nutrition to the ligament until the extremity is reached, and there it seems that the cord requires further blood-supply from some other region. Those of you who are familiar with the anatomy of this region in the male will remember that the deep epigastric artery, at a short distance from the point at which it is given off, sends a small branch to the spermatic cord, which is distributed to the cremaster muscle and is called the cremasteric artery. Now, in the female there is a similar artery, with this exception, that when it reaches the external inguinal ring, instead of being distributed as in the male you find it making a loop, turning directly backward, to be distributed to the extremity of the round ligament. Passing down the round ligament, the vessel probably—I say probably because I have not yet finished the dissection—anastomoses with the artery entering the ligament at the uterus.

Now, if you make great traction upon the round ligament, you will be likely, of course, to interfere with the calibre of its blood-vessels,—the artery and vein extending in the direction of the uterus; and if you cut off the end of the ligament or stitch it to the surrounding walls, and pass the ligature in such a way as to ligate the extremity of the ligament, you will interfere with the blood-supply from that direction. I would therefore suggest to you, in performing the operation, that you relieve the round ligament of traction as much as possible by putting a cotton tampon into the vagina, so as to lift the uterus up and leave the ligaments lax, and, in stitching the end of the ligament in position, introduce the needle in such a way that the sutures shall be longitudinal to, and not bisecting, the tube. Draw the cord out, and, having located the spot upon the anterior surface of the pubis at which you desire to place it,—a point just to the inside of the spine,—pass your stitches coincidently with the length of the cord, and, if you can do so, push the vessels to one side. If you are able to do all this, you will avoid interference with the circulation to any serious degree.

ORIGINAL COMMUNICATIONS.

DIURETICS AS THERAPEUTIC AGENTS.

BY V. M. REICHARD, M.D.

COMPLETE depuration is indispensable to healthy blood; and where the renal secretion is inadequate, either in its fluids or its solids, the general health must eventually suffer, for a circulating fluid loaded with impurities cannot keep the body up to its standard of usefulness. The kidney is a compound organ,—filtering and glandular. The Malpighian body is adapted specially to the filtering. "A large artery breaks up in a very direct manner into a number of minute branches, each of which opens into an assemblage of vessels of far greater capacity than itself, and from which there is but one narrow exit. Hence must arise a very abrupt retardation in the velocity of the current of the blood" (Bowman).* The Malpighian body hence acts as a filter, its activity being in direct proportion to the blood-pressure. The epithelium lining the tubules has a double function. Under ordinary circumstances it excretes, by its affinity for such substances, the urinary solids, and perhaps some foreign substances. Under certain conditions it also excretes urine.

This may be laid down as axiomatic: the more thoroughly the blood is depurated of the nitrogenized products of waste the more nearly perfect will be the working of the animal economy, other things being equal. The system must be rid of these waste products of metabolism before

* Fothergill's Hand-Book of Treatment.

it can take and properly assimilate more material. In fact, if we consider a healthy appetite as nature's call for food, we must have the blood purified before we can have a healthy appetite. Suppressed gout and the protean troubles arising from the retention in the blood of uric acid and its salts are frequently encountered in all classes, and, it is fairly to be presumed, are not recognized in a great many cases. I have found them usually limited (and the success of the treatment was considered as proof of the diagnosis) to stout, corpulent persons, and generally, but not always, hearty eaters. The lymphatic temperament prevailed, but in some cases it was the nervous. Whether, however, the nervousness was cause or effect I am not prepared to say. The patient's complaints are many,—indigestion, headache, desire to sleep after meals, sleeplessness at night or sleep disturbed by nightmare, pain in the back and a tired, worn-out feeling, coated tongue, bad breath, constipation, high-colored and scanty urine with a colored or white deposit on cooling; and any or all of these combined in a stout, sluggish person should lead to a strong suspicion that there are retained materials in the blood which the kidneys have failed to throw out. Whether the cause be deficient action of the kidney or improper action on the part of other organs, the result is the same. In persons predisposed, almost anything which disturbs the animal equilibrium may cause it. An attack of malaria, cholera morbus, excessive exertion in hot weather, prolonged anxiety, living secluded and taking but little exercise have all been noticed as causes in my cases. Fothergill* gives increased tissue-waste without compensating renal activity to carry off the waste as a cause of the typhoid state. A case of mine bears upon the point in question.

Mrs. P., æt. 40, widow, mother of eight children, stout and muscular, nursed a son through a long and severe attack of typhoid fever in August, 1883. In September was herself attacked; was confined to bed five weeks. Her temperature at no time exceeded 103° in the evening. Her emaciation was very great, the skin hanging in folds. The temperature returned to the normal, and she was discharged convalescent. In about three weeks she again consulted me. At this time the report says,—

3 P.M.—Temperature 103°; pulse 130, weak and thready; unable to lie down on account of dyspnœa; cough almost constant. Examination of the chest shows only a few râles posteriorly; no dulness anywhere. The tongue covered with a dark-brown dry coating all over, very heavy towards the back part; fauces red and inflamed; bowels torpid; urine very scanty and high-colored,—no chance to make a minute examination, but from the gross appearance the sediment, which formed about one-fourth of the volume, was composed of urates and mucus. Treatment: one-fourth grain of morphia and one grain of calomel every six hours; also one-half ounce of infusion of digitalis and ten grains of bitartrate of potassium given in a glass of water every four hours until the kidneys acted freely.

I was unable to see the case until about forty-two hours had elapsed: looks bright and has a cheery greeting; has slept well both nights; passing water freely; says she is "running away;" *no cough at all;* tongue clean; appetite ravenous, and she feels good on what she eats; bowels been opened several times; temperature *normal;* pulse full, then 80; the digitalis was given only every six hours, and at the end of a week she was ordered Basham's mixture. At this time she was out of bed. She has had trouble whenever she allows her kidneys to act less freely than they should.

I conceive the conditions to have been these. There had been great destruction of muscular and other tissue, producing much nitrogenized waste. For a time the kidneys were equal to the work. Convalescence came on and the temperature returned to the norm. But, the kidneys being to a greater or less extent functionally exhausted, and the blood-pressure being low, there was not enough of either fluid or solids thrown off. This will account for the condition in which she was found. The liver, clogged with the effete products of metabolism, was inactive, the crystals of uric acid in the walls of the bronchial tubes kept up a constant irritation, and the retained nitrogenized material caused the elevation of temperature. Whether this be true or not from a pathological stand-point, it is certain that treatment based on this reasoning was gratifying in the highest degree to both myself and the patient.

Whatever may be said as to diet applies more properly to the *prevention* of lithæmia. With the system clogged and all the organs handicapped with the products of waste, we must meet the indication by removing such products; and the rational treatment

* Quoted in Da Costa's Medical Diagnosis, p. 782.

in such cases is to increase the action of the organs excreting such waste,—*i.e.*, the kidneys. This brings us to the subject of diuretics. These may be divided into two great classes: those in which the chief effect is an increase in the amount of urinary water, and those in which there is a decided increase in the urinary solids. The first act principally by raising the blood-pressure; the latter have a selective affinity for the renal epithelium, causing secretion of solids and—to a less degree—fluid. In the first class stands the digitalis group. In the second are the alkalies and most of that class of drugs known as urino-genitals. Of these last, buchu stands first as a diuretic. In considering these two classes, the most active will be taken and considered as the type of the whole class.

In the first class digitalis stands easily at the head, and of all its preparations the infusion is the diuretic *par excellence*. It (the infusion) seems to have some special action on the kidney. With no other preparation of the remedy, given even in equivalent doses, have I been able to secure the same amount of diuresis. The pulse may show the specific effect of the drug, and still the diuretic effect will not be produced to the same extent.

Much has been written and said about the cumulative effect of digitalis, but in my own use of the drug I have never had any bad result further than disordering the stomach. This it is sure to do if pushed strongly and continued for a week. But when a diuretic is indicated because of either dropsy or retained substances in the blood, and there is a rapid, weak pulse, the infusion of digitalis will act like a charm for a few days. After being given in decided doses for a few days (say a tablespoonful every four hours), it can be reduced either in the size or the number of the doses, so there will be not much danger of gastric disturbance. Sometimes, however, we are forced to abandon the use of the drug entirely until the tongue cleans and the stomach regains its normal tone.

In a recent case of extensive œdema of the lower extremities, due to cardiac dilatation, I secured the most happy results by intermitting the digitalis and giving convallaria. Though the latter had no appreciable diuretic action, yet as a cardiac tonic it sustained the heart until the digitalis could be resumed.

Caffeine has high authority in its favor as a diuretic and cardiac tonic in advanced cases of cardiac dilatation. "A great advantage of caffeine is that its diuretic effects are seen even when the kidneys are altered."* I have had no experience with it, having found digitalis and convallaria sufficient in all cases.

Outside the body lithium carbonate will dissolve more uric acid than any other of the alkalies. I have had no experience with it, having confined myself entirely to the potash salts. The salts with vegetable acids break up readily in the blood, and its alkalinity is increased, carbonic acid being given off. The increased alkalinity of the blood renders the urine less acid, or alkaline, and the amount of urates deposited on cooling is diminished. All these alkalies, the acetate especially, increase the amount of urinary water as well as solids, and in choosing an alkali as a diuretic it is rather a matter of personal preference. The only thing to avoid is giving a soda salt, as the insoluble urate of sodium will be formed, and harm will result where good was expected.

Buchu stands as the type of diuretics the activity of which depends upon a volatile oil. It is indicated where a diuretic is indicated as a diuretic pure and simple, with no reference to the heart. In any case of idiopathic renal insufficiency it is the drug to be given, or if for any cause the amount of urinary water is to be increased without affecting the blood-pressure. Cases of lithæmia all do better if buchu be added to the alkali. A plan which I have often used with much satisfaction is to give about twenty grains of bitartrate of potassium with an ounce of infusion of buchu in a cup of cold water every three hours. Under its use I have seen nervous, depressed, neuralgic women brighten and clear up mentally and physically. After being literally "washed out," they have in a number of cases expressed the greatest satisfaction, and requested to be allowed to keep some of the medicine on hand.

In ordinary routine work, it may not always be possible to say in just what cases buchu and an alkali will do good. The effect, however, will soon show whether the diagnosis be right or wrong. As they are mostly subacute or chronic cases, one has a chance to make the trial of several diuretics.

FAIRPLAY, MD.

* Bull. Gén. de Thérap. Quoted in Amer. Jour. of Med. Sciences, October, 1884.

SOME STATISTICS OF HEPATIC DISEASES.

AN ANALYSIS OF CASES PRESENTED TO THE PATHOLOGICAL SOCIETY OF PHILADELPHIA FROM 1857 TO 1881, INCLUSIVE; WITH A DETAILED STUDY OF THE FATTY, THE CANCEROUS, AND THE CIRRHOTIC LIVER.

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(Continued from page 765.)

CARCINOMA OF THE LIVER.

FORTY-ONE instances of this affection were reported in two hundred and forty-six cases of hepatic disease. Of the forty-one, nine were primary, thirty-one secondary, and one was not classified with either division. Pursuing the same outline as when considering fatty liver, we find, in studying the causal condition, that *sex* was not a prominent factor. Thus, of the cases in which the sex was given, when primary, four were males, four females; when secondary, nineteen males and eleven females.

The *age* had much influence in the development of this disease. With the exception of one case in a child aged eighteen months and one of a female aged twenty-two years, all the primary cases occurred after forty; three from forty to fifty; two from fifty to sixty; and one from sixty to seventy. Save four cases in late adult life (twenty-seven to thirty-five), all the secondary cases occurred in the middle or later periods of life: thus, from forty to fifty, eleven; fifty to sixty, nine; sixty to seventy, four cases; and after eighty, one case. Prior to forty there were three females to one male; from forty to fifty, six males to one female; from fifty to sixty, eight males to one female; from sixty to seventy, three males to one female; and the patient that was over eighty years old was a female. The females then were in excess in the early, the males in the later periods of life.

Neither the *occupation* nor the *habits* seemed to have any determining influence on the disease. The occupation of but one patient who had the primary disease was given,—a laborer. Fifteen in whom the disease was secondary were of the lower classes of society, with the exception of a "manufacturer," who was possibly of the better class. Regarding the habits of the individuals, again but one primary case was recorded, and that one was intemperate; while four of the secondary were intemperate, two were temperate, and one was of sedentary habits. The same may be said of the *previous health.* In no instance did it have any apparent influence. One primary and four secondary cases are recorded with previous good health; one of the secondary had had uterine disease, another rheumatism, and a third dyspepsia.

Race and *marital relations* showed similar negative influence. Two females and one male were colored. Five females and one male were married.

In the instance of *heredity* we have but little of decided value. One male, one female, and one whose sex was not recorded, in whom the disorder was primary, were noted as without hereditary tendency. The same tendency was absent in eight of the secondary cases. But two of the cases are positively affirmative. In the case of the female aged twenty-two, it was noted that her father had cancer of the breast, and in a man aged fifty-four the mother had had the disease in her face. In both the disease was primary. Compared with other statistics, these are complete: thus, of nine primary cases, heredity was noted as present or absent four times, twice in each instance. There were no cases in which nervous depression of any kind, a pre-existing constitutional change, or any previous local injury, irritation, or degeneration of the liver (in the primary cases) were recorded which could be looked upon as causal.

Pathological Anatomy.—In the above remarks the term carcinoma is used in a generic sense to include all forms of malignant diseases as they are embraced clinically. The series of forty-one cases include examples of the hard and soft, the colloid, the melanotic, and the hæmatoid cancer, or carcinoma telangiectodes, and two cases of cylindrical epithelioma. To specify: five of the nine cases of the primary disease were of the encephaloid variety, one was a cylindrical epithelioma, one a hæmatoid cancer, and three were not classified. In the secondary variety twelve belong to the encephaloid, twelve to the scirrhus groups, and one to the colloid and the melanotic; one was a cylindrical epithelioma, and three were not defined. The following table shows the relation of the various forms to the age and sex of the patient:

TABLE VI.—*Showing the Age (arranged in Decades), the Sex, the Seat of the Primary Disease, the Presence or Absence of Secondary Deposits, and the Character of the New Growth, in Cases of Secondary Cancer of the Liver.*

Decade.	Age.	Sex.	Seat of Primary Deposit.	Seat of Secondary Deposit in Addition to Liver.	Variety.
3d.	27	F.	Breast and skin.	Kidneys, mesenteric glands, and ovaries.	Epithelioma.
4th.	35	M.	Supra-renal capsule.	Mesenteric glands, lungs, and spleen.	———
	31	F.	Stomach.	Mesenteric glands.	Scirrhus.
	35	F.	"	Glands of lesser curvature.	———
5th.	45	M.	Pancreas.	No other secondary deposit.	Scirrhus.
	40	M.	" and mesenteric glands.	Right kidney.	Encephaloid.
	48	M.	Orbit.	Cervical and post-sternal glands.	Melanotic sarcoma.
	45	M.	Stomach.	Pancreas.	Encephaloid.
	49	M.	Pancreas.	Glands in the hepatic fissure.	Epithelioma.
	40	M.	Stomach.	Mesenteric glands.	Encephaloid.
	46	F.	Uterus.	" " and pleura.	———
	46	F.	Labium.	" " and glands of groin.	Encephaloid.
	45	F.	Leg.	No other secondary deposit.	"
	49	F.*	Skin.	Mediastinal glands, lung, and kidney.	"
	40	F.	Breast.	Uterus and pleura.	Scirrhus.
6th.	54	M.	Epithelioma of hand.	Lungs and spleen.	Encephaloid.
	58	M.	Rectum.	General.	Scirrh. and melanosis.
	56	M.	Stomach.	Mesenteric and bronchial glands.	Scirrhus.
	54	M.	"	" glands and spleen.	"
	52	M.	Kidney.	Lung.	Encephaloid.
	59	M.	Stomach and duodenum.	Mesenteric glands.	Scirrhus.
	56	M.	Stomach.	" " and pancreas.	Encephaloid.
	50	M.	"	" "	Scirrhus.
	50	F.*	Vagina.	Lungs.	Carcinoma gelatinosa.
7th.	66	M.	Peritoneum.	No other secondary deposit.	Encephaloid.
	62	M.	Stomach.	Mesenteric glands and glands in hepatic fissure.	Scirrhus.
	64	M.	"	Mesenteric glands and lung.	"
	65	F.	Breast.	Glands and osseous system.	"
9th.	81	F.	Pancreas.	Glands and lung.	"
No age report'd.	—	M.	Stomach.	———	Encephaloid.
	—	—	Mesenteric glands.	No secondary deposit.	
Total.	31	M. 19. F. 11.			Scirrhus, 12; encephaloid, 12; epithelioma, 2; c. gelatinosa, 1; melanotic sarc., 1; no character mentioned, 3. = 31.

The striking feature of the table is the fact that the soft cancers are so much more frequent from forty to fifty years of age, the hard in the succeeding periods, while the epitheliomas are in the earlier periods of life.

Metastasis.—In connection with primary carcinoma of the liver, reproduction in other organs was noted in but two instances. The glands in the fissure of the liver were found to have undergone a similar degeneration in a case of encephaloid of that organ, and a tumor was found in the brain and a similar invasion of the pancreas and some mesenteric glands observed in a case of cylindrical epithelioma.

In the thirty-one instances in which the metastatic growth was seated in the liver, the original deposit varied very much in its position. In the largest number of instances the stomach was the primary source, twelve times: ten of the twelve were males, two females. Eight of the twelve cases were of the scirrhous variety, three of the encephaloid, and one was not recorded. In four instances in males the pancreas, in three in females the breast, was the primary seat of the disease. The remaining twelve cases had the growth in as many different organs of the body. In addition to the secondary involvement of the liver, in almost every instance other organs were included, at times the metastasis being general. The mesenteric glands were infected twenty

* Colored.

times,—six times alone, once each with the osseous system, the ovaries and kidney, the lung and kidney, the spleen, and the pancreas, twice with the pleura, and five times with the lung. Deposits were found also in the kidney and in the pancreas once each, in the lung and spleen once, and in the lung alone twice. To summarize. Along with secondary growths in the liver, similar deposits were found in other organs in twenty-six of the thirty-one instances. In one instance only was the metastasis confined to the liver, in two there is no record, and in the last of the thirty-one the condition was so remarkable as to be worthy of further notice. A case of scirrhous carcinoma of the rectum was presented, with the unusual accompaniment of universal melanosis. The melanotic deposits were found in every organ or tissue of the body, save in the brain, spinal cord, eyes, bones, joints, and muscles. Prof. Gross, Sr., the reporter, said the peculiarities of the case were the extensive distribution of the heterologous matter and the combination of melanosis with scirrhus, etc.

The above statistics correspond very closely with the facts of Frerich. It may be said, too, that the primary foci in twenty of the thirty-one cases were in the area of the portal circulation. There were no investigations into the cause of the metastasis by any of the reporters; no record of disease of the veins or lymphatics; no observation of the track of the infective material from the original source. Studying the evidence presented, there do not seem to be any facts to warrant one assuming any but a local origin for these tumors.

Macroscopical Appearances.—In every instance in which the carcinoma was primarily of hepatic origin the liver was invariably enlarged. The heaviest weighed fifteen and one-half pounds; the lightest one recorded weighed seven pounds fifteen ounces. Primary carcinoma is found in nodes, one or more in number, or as a diffused infiltration, the former appearance being in large excess. In the nine recorded cases, five were nodular, three diffused, and one not described. When in nodes, they were generally confined to one lobe, and did not amount to more than two in any cases save one, in which it was said the surface was studded with nodes, umbilicated and protruding, large in size, measuring from one-half to five inches in diameter. In one instance the node was described as spherical, and twice as rounded. The size varied from the one-half-inch nodule to a mass which occupied the whole left lobe of the liver, or which contained over a quart of fluid, or to one which was five and five-eighths inches in diameter, or one the size of a large fist. One of the nodules was encapsulated; the remaining ones, though tolerably distinctly separated from the hepatic tissue, were not so circumscribed. The appearances on section, the umbilication, the character of the juice, and the retrogressive changes were the same as have been so often described. In one or two instances the extreme degree of central necrosis caused a large accumulation of fluid,—one a quart, dark brown, containing pulpy masses. The reporter called attention to the resemblance to abscess. One of the masses was described by Prof. Pepper as being composed of white nodules from a pea to a walnut in size, separated by bands of hepatic tissue, the centre of which was dense and fibrous, the periphery rose-pink with purple-red, and yielding no juice on section, and no points of hemorrhage. The location of the masses varied. Two were found in the right lobe alone, one in the left, and one in both lobes. The diffused primary infiltration is rare, yet, if read correctly, three of the nine were of this variety. In one the surface was studded and the structure infiltrated with the cancerous mass,—or the hepatic structure was displaced by circumscribed deposits of medullary cancerous tissue of a yellow-white color marbling the surface, rising in nodules in every direction, soft and compressible. This example probably should be classed as nodular. Again, the yellow masses ranged in size from a millet-seed to a walnut. In neither form was there a note made as to the condition of the veins or the gall-ducts.

The naked-eye appearance of the secondary carcinomatous liver varied very much also. Nineteen of the thirty-one cases presented enlargement of liver, four normal size, and two atrophy. In one of the last instances the liver weighed one pound fifteen ounces, contained but one nodule, and showed some depressions on its surface from perihepatitis. The disease developed secondarily to carcinoma of the pylorus. Here, too, the disease appears in nodes, but they are multiple generally. In

six instances, however, there was but one nodule. In other cases there were three or four (two) or "several" (two) to as many as thirty-five in one lobe, or to innumerable masses. The size varied from that of a pea to that of a cherry, a walnut, or an orange. In their gross characters the nodules resembled the nodules of primary disease. Retrograde change was frequently noted. In one case a dark-brown fluid, amounting to twenty-four ounces, was taken from an irregular cavity circumscribed by a membrane of new formation.

There were two or three of the reported cases which deserve a more extended notice. One rare and curious case reported by the late Prof. Gross, which has been tabulated under the secondary variety, presents the unusual phenomena of a carcinoma coexisting with general melanosis. The patient was a male, 58 years old, who had cancer (scirrhus) of the rectum. Later the melanosis developed. At the autopsy,—performed by Gross and Richardson (of New Orleans),—in addition to the scirrhus, melanotic tubercles were found underneath the skin, on the peritoneum and omentum, in the liver, pancreas, stomach, bowels, kidneys, supra-renal capsules, prostate gland, bladder, lymphatic glands of groins and pelvis, also in the lungs and bronchial glands, the heart and thyroid gland, and a small tubercle underneath "the serous coat of the left iliac artery." Prof. Gross remarks on the great extent of the disease, and the combination of the two forms of malignant disease. (See vol. i. p. 286.)

The other example of melanotic sarcoma developed secondary to an injury to the eye. The accident occurred in 1860. In 1865 a small tumor protruded from the eyeball and was removed. Recurrence took place in two years, and its removal was repeated three times. He finally died of the general metastasis in 1868, over three years after the development of the primary growth.

The solitary case of carcinoma telangiectodes is very remarkable, especially in the age of the patient in whom it developed. The child was but eight weeks old: the disease was only manifested ten days before death by enlargement and increase in firmness of the abdomen. Pain was the only marked symptom. The liver, at the autopsy, was found to weigh more than eleven and one-half ounces. The capsule was smooth, the color of the organ yellow. The right lobe was normal. "The left lobe was the seat of a large, rounded growth, which occupied its entire extent, projecting from both surfaces. The tissue composing this mass appeared dark, in places almost blackish, through the capsule." The peritoneum was ruptured on one of its surfaces, over which was a clot of blood, while fluid blood was found in the peritoneal cavity.

The state of the tissue of the liver not invaded by the carcinoma was reported thirteen times. Eight times it was fatty, six of the times the carcinoma being of the medullary variety. Once each the organ was congested (presented the nutmeg-congestion), was cirrhosed, was pigmented, and contained an hydatid cyst.

Microscopical examination was not reported in detail in many of the cases. There were no special investigations as to the histogenesis of the carcinoma; no opinion expressed as to whether the disease developed from the hepatic cells or the duct epithelium; nor were there any accounts of the influence of veins, arteries, ducts, or lymphatics in the metastasis, save in the perfect report of one case by Dr. Shakespeare. A few of the more complete microscopical examinations are appended.

Prof. Tyson described the microscopical picture in a case of melanosis, saying, among other things, that the pigment was free and enclosed in cells; that the cells were irregular in size and shape, shrivelled, with one nucleus, and with fat-granules; that free nuclei and free oil-granules and drops were abundant, and that the pigment was in reddish flakes. The character of the pigment and its presence in the cells were specially commented upon.

The microscopical examination of the carcinoma telangiectodes was also made by Prof. Tyson. The morbid specimen was made up of a large-meshed stroma filled with blood-corpuscles and cells. They, the cells, are mostly pale, faintly granular, and generally contain one indistinct nucleus. Few multinuclear cells were present, comparatively. Others of the cells were more highly granular, and others completely fatty. Some free oil was present. The tissue was vascular; there were but few pigmented cells; and the blood was in abundance, apparently outside the vessels.

The case on which Dr. Shakespeare

made a microscopical report was very interesting. The primary disease was seated in the stomach, the secondary deposits were in the liver, omentum, and mesentery. On section, they presented the character of scirrhus. The cancerous growths around the vessels entering the liver developed from the endothelial coats of these vessels; and even in sections of the liver itself, to the finest ramification of the artery, this irritation could be traced. These nodules developed in the periphery of the lobe, opening from the tissue around the arterioles of the hepatic artery. The destruction of acini began in portions bounded by the arterioles.

Dr. Formad reported a case of primary cylindrical epithelioma of the liver, which, on section, showed the transformation of such process to a simple glandular carcinoma, as described by Perls.

In addition to the occurrence of secondary deposits in other organs along with similar deposits in the liver, the changes, if any, that these organs had undergone were studied with care, both in primary and secondary carcinoma of the liver. In the primary disease the condition of the spleen was recorded five times, each time as normal; the kidney, five times normal, once fatty; the heart as fatty once and normal once. The spleen was found to be healthy ten times, small twice, enlarged once, and very small once in fourteen cases of the secondary malignant disease. Under the same circumstances the kidney was recorded normal eight times, cystic twice, and fatty and atrophied once each. In one instance there was found tubercular disease of the lungs accompanying the dissimilar new formation. The case was reported by Da Costa and Woodward, and quite a discussion arose as to the occurrence of these double lesions. In the instance in which the spleen was enlarged there were also enlarged abdominal veins, indicating obstruction in the portal circulation.

The condition of the stomach and intestines was not often recorded. It will be remembered that in twelve instances the stomach was primarily diseased. Five times the organ was noted as healthy, four times as enlarged, twice as congested, once each as inflamed, as small, as ulcerated, as the seat of melanotic tubercles, and as unusual.

In one of the cases the duodenum and small intestines were ulcerated; in another the duodenum was congested; in a third the duodenum and large intestines were highly congested.

An analysis of the symptoms is, in a measure, out of place in this pathological summary, and therefore the hasty sketch will include generally those symptoms which depend on anatomical change in the liver. It is difficult to make a comparative study of the symptoms in the secondary forms, on account of the blending of those of the original lesion with those referable to the liver. Taking the primary hepatic carcinoma for study first. In nine cases, jaundice was present in but two instances; ascites in one only, and that found at the autopsy; abdominal veins enlarged in one case; the spleen was not enlarged in any case; pain was present three times (severe in tumor), notably absent in two; emaciation was present in seven cases, absent entirely in one; in two instances cachexia was recorded as absent, in the remaining cases the record is negative; anæmia was noted once; weakness was explicitly recorded once only, but might be inferred in most of the cases; nausea and vomiting each occurred once; the bowels were normal in three, diarrhœa was present in two cases, and intestinal hemorrhage in one case. The most characteristic phenomenon was the change in the shape or size of the liver. Five times out of nine this organ was enlarged, twice it was enlarged and nodular, once it was enlarged, hard, and nodular, and once it was recorded as a tumor in the right hypochondrium. Practically, therefore, we may consider that emaciation and prostration, enlargement and nodular bossilation of the liver, with jaundice in a few instances, are the only common signs and symptoms of primary carcinomatous disease of that organ.

The symptoms of the secondary variety could generally be traced as depending upon the primary lesion. Thus, the jaundice, which occurred five times, was due to the involvement of adjacent organs, as the pancreas, lymphatic glands, or stomach. Ascites was not present nine times, but present five times, and could be explained by similar lesions as in jaundice. The spleen was not enlarged; the outline was similarly changed as in the primary disease in twelve of the cases. Emaciation was present seventeen times in the thirty-

one cases, prostration in almost as many, while the cachectic appearance was recorded in but three instances, and in two of these the liver was fatty. (See Woodward's remarks on fatty liver.)

It is difficult to determine the duration of the carcinoma at its best, and when histories are not as complete as they should be, nothing but general results can be obtained.

CIRRHOSIS OF THE LIVER.

The following remarks are based on an analysis of thirty-eight cases of this affection, representing the number of cases reported to the Society in which the chronic inflammation was more decided than any other lesion. Thus, of the eighty examples of fatty liver, in six cirrhosis was also present, but entirely subsidiary to the fatty changes. Dr. Fagge* has said that cirrhosis occurs much more frequently than we would expect from the number of times we are brought in contact with it at the bedside. In other words, often serious and extensive granular degeneration of this organ occurs without producing any signs or symptoms. The following analysis supports this view. Thus, seventeen times out of thirty-eight there were no symptoms of the hepatic disease, the patients having died of other affections, acute or chronic. To these must be added four instances in which the hepatic symptoms were present to a minor degree and might have been caused by the more serious accompanying affection which caused death. These symptoms were ascites and jaundice, the latter occurring but once in the four: in a case of cancer of the kidney. The ascites occurred in that case and also in the three remaining cases,—two of organic heart-disease and one of cancer of the pancreas. It is thus seen that twenty-one times in thirty-eight the disease was without symptoms. The remaining cases, seventeen in number, presented the symptoms of cirrhosis and were recognized as such during life.

Taking the entire number, the ages varied very much, but the time of most frequent occurrence was from the thirtieth to the sixtieth year. The table following gives the exact number of cases in each decade. The age was not recorded in two of the cases.

2	from	10	to	20.
2	"	20	"	30.
6	"	30	"	40.
7	"	40	"	50.
12	"	50	"	60.
3	"	60	"	70.
4	"	70	"	80.

The youngest subject was nineteen, the oldest seventy-six. Of the uncomplicated cases, the same proportion to each decade occurred. The ratio of males to females varied very much, there being thirty of the former to eight of the latter. Curiously, nearly half of all the females (three) were over seventy years of age. In all of them, as in the male of that age, the disease occurred concomitantly with disease of other organs, and was a part of the ageing process in all probability. The male was, however, also an alcoholic.

Further study of the predisposing and exciting causes of the disease confirmed the well-known influence of intemperance in this connection. It was distinctly recorded that nineteen of the cases gave a history of intemperance. Two of the intemperate had syphilis, two had organic heart-disease, one each had interstitial nephritis, general atheroma, cancer of the pancreas, and similar disease of the kidney. The syphilis, the heart-disease, and the carcinoma might have been coexisting causes; the nephritis and atheroma were results of the same cause. The eleven remaining intemperate cases were examples of simple, uncomplicated cirrhosis. Four of the remaining thirty-eight were temperate. The exciting cause in these cases was as follows: in one malaria; in one malaria and organic heart-disease; in one female, 73 years old, the hepatic disease was a part of a general sclerosis and degeneration; and in another, though but 58, the disease probably was part of the same process, the kidneys being associated. Nineteen, then, were intemperate, four temperate, and fifteen were not classified. Five of these cases died of acute disease, and there is nothing in the history by which to judge as to the cause. Of the final ten, organic heart-disease was the cause of the death of five, diabetes of two, carcinoma of the pancreas, carcinoma of the stomach, spinal caries, and tuberculosis of one each.

Neither the occupation, the family history, nor the occurrence of previous disease had anything to do with the develop-

* Guy's Hospital Reports.

ment of the disease in any instance. In no instance was there any note of obstruction in the hepatic duct being the primary cause.

Pathological Anatomy.—The *size* of the liver varied. Ten times it was small or contracted, nine times enlarged, and four times normal or thereabouts. The largest weight that was given was five pounds, the smallest two pounds two and a half ounces. In one the liver was reduced to the size of two fists, and its left lobe was almost entirely gone. The descriptions of the appearance of the liver varied very much. It was described as completely cirrhotic, four; cirrhotic, thirteen; slightly cirrhotic, two; cirrhotic and fatty, four; in the first stage of cirrhosis, three; and hob-nailed in appearance, four.

The following terms were applied to individual organs to mark their appearance: granulated, nutmeg appearance, the seat of fibrous deposit, nodular, firmly nodulated, irregular in outline, and granular. In one instance there was a combination of cirrhosis and hydatid disease. The *color* was described as brown-yellow in one instance. The *capsule* was noted as thickened, opaque, etc. The *consistence* was stated as hard, three; firm, three; elastic, one; dense, one; and tough, one. On section, one noted a creaking sensation.

The *spleen* varied considerably in size, the alteration being more noticeable in the simpler, uncomplicated forms of cirrhosis. In these cases five times it was enlarged and three times normal; once its capsule was thickened. One of the enlarged spleens was firm, another cirrhotic, a third pultaceous. In the complicated cases the spleen was small three times, normal once. The *kidneys* in the primarily uncomplicated cases were healthy twice, cirrhotic three times, congested once, and fatty once. It was cirrhotic six times in the nineteen remaining cases, four times congested, once fatty.

The *heart* was primarily diseased seven times. In the simple cases it had undergone hypertrophy, hypertrophic dilatation, fatty degeneration, and atrophy once each. That the liver is involved in the changes described as arising from arterio-capillary fibrosis there is no doubt. In four instances this appeared to be proved, for in them all there was conjoint atheroma and cirrhosis of the kidney, and twice the pancreas.

The influence of the obstructed circulation on the stomach and bowels was shown in a few instances. The gastric vein, a branch of the portal, it is well known anastomoses with the veins in the lower part of the œsophagus. These veins thus in cirrhosis become varicosed; infarcts and ulcers develop; hemorrhages occur, and rarely death takes place. In two of the cases recorded this accident occurred. Thrice the stomach was ulcerated; once its mucous membrane was congested. The histological appearances were not different from those usually seen in cirrhosis. New questions were not raised, and therefore the microscopic changes will be passed by.

Symptoms.—Our analytical study of the symptoms will embrace only the seventeen cases previously mentioned of simple cirrhosis. In the first place, the insidiousness of the disease is no more plainly seen than in the history of each individual case in reference to the occurrence of symptoms of the first stage. *Four* times only is any record made: in one case there was abdominal pain, in one failure in health, in one slight jaundice, in one biliousness.

The symptoms of the next stage are more complete. Physical examination of the liver revealed enlargement of the organ three times, and diminution in size four times. On palpation, it was determined to be "hard" once. The spleen was enlarged twice, normal twice. The autopsies showed it to be enlarged five times; hence it must have been overlooked. There were no cases in which there was enlargement of the abdominal veins. Ascites alone or with œdema was the most frequent symptom. Alone, it was recorded four times; with œdema, seven times. There was no ascites in three of the cases, and one had hydrothorax; while in two more the presence or absence of the condition was not recorded. Jaundice was marked in two instances, due to enlarged glands in the fissure of the liver probably; in a third and fourth it began during an attack of malaria, which was antecedent to the cirrhosis. Hemorrhage, both intestinal and gastric, took place in two cases. Diarrhœa occurred in six, nausea or vomiting in two, loss of appetite in three, hepatic pain in three cases, and epigastric pain in one case. Emaciation was expressly recorded three times, but could be implied much oftener; while

exhaustion was not recorded, but could be inferred. This is especially true, as in every instance death was caused by the hepatic disease alone or some complication of it, as hemorrhage, except in a case which died of peritonitis.

Finally, it may be said there was no evidence to show that the hepatic diseases had any deleterious influence on intercurrent diseases, as similar lesions of the kidneys have.

From this summary of symptoms it is learned that ascites is the most common symptom of cirrhosis of the liver; that gastro-intestinal catarrhs are the next most frequent; that enlargement of the spleen and changes in the size of the affected organ succeed the catarrhs in frequency; that hemorrhages and jaundice may occur; that enlargement of the abdominal veins is not common. If with these symptoms, considered in the sequence as above, the age and the habits of the patient are considered, and a degree of emaciation, prostration, and peculiar appearance of countenance taken into account, the diagnosis will not generally be difficult.

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REPORT ON THE PROGRESS OF MEDICINE.

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CHOLERA IN PARIS.

FOR reasons that are obvious, epidemic diseases are often best studied, from the clinical point of view, in localized outbreaks. The following observations by Lermoyez (*Le Progrès Médical*) — conducted in L'Hôpital Bichat, one of the smaller hospitals of Paris, set apart for the reception of cholera patients towards the close of 1884—are not without interest. The history of this hospital with reference to cholera is peculiar. Upon the appearance of the disease at Toulon in June, the hospital was made vacant and prepared for the reception of cholera patients, with a capacity of one hundred and thirty beds. In the course of three months there were sent to it by the police authorities about forty supposed cholera victims, which, upon investigation, proved to be cases of indigestion, bronchitis, leg-ulcer, phtheiriasis, many aged wretches, tramps, etc. One day in the beginning of August, they sent a true case of cholera. This attracted great attention, excited the curiosity and received the visits of many persons both in and out of the profession, and the patient, having become a personage of importance, died happy. At the autopsy there were found the characteristic lesions of cholera. Thus commenced with the death of a rag-picker of Clichy the Paris cholera epidemic of 1884.

After that, for six weeks the physicians of the hospital treated cases of phthisis, two heart cases, one case of hernia, one of metritis, one of broken ribs, and, at the end of the time, lo! a second case of cholera. Others followed, seven in all, of whom five died. Seven cholera cases in three months for one hundred and thirty beds,—that is to say, about one seventeen-hundredth case per bed and per day!

The authorities then reopened the hospital to the usual applicants. The 1st of November its wards were again full. At once the cholera, which only seemed to have awaited a favorable opportunity, appeared in Paris. The one hundred and thirty beds were again vacated, and the institution became for the time being a cholera hospital. Sixty-one true cholera patients were sent to it by the municipal police; two cases only applied directly at the office of the hospital.

After some interesting statements concerning the localities from which these patients came, Lermoyez contributes observations upon the sex, age, occupation, and temperament of these individuals.

As a result of this analysis, he found that the cholera attacks more males than females,—the latter, in fact, undergoing less hardship, being less exposed to the evils of intemperance and other excesses, and leading much more regular lives than males; that the cholera is (except in very young infants, in whom it is almost always fatal) the more serious in proportion to the age of the patient; that its frequency is much greater in the middle period of life, the period of excess and fatigue; that its gravity is extreme in advanced age, when the feeble powers of the organism poorly withstand it; that the proportion of fatal cases is greater in women than in men. The last observation is at variance with the statistics of the epidemics of 1832, 1854, etc. No conclusions of importance could be drawn from the occupations of these persons. Eight were rag-

pickers, six worked in a refinery, three in an omnibus depot; there was one laundress, one nurse, two workers in copper. They were in common, however, the victims of unspeakable wretchedness, filth, poverty. Indeed, so poor were they that the clothing of twenty men who died yielded upon search a total fortune of thirty-two sous.

All those who suffered from any chronic pulmonary or intestinal lesion died. On the contrary, three, who were the subjects of cardiac lesions, recovered. Finally,—and this fact is so well understood that it is scarcely necessary to dwell upon its importance,—all those who admitted intemperate habits or who presented the signs of alcoholism, blurred as they might be by the features of cholera, perished. The mortality was fifty-two per cent., whereas in other hospitals it amounted to seventy-five or eighty per cent., a difference to be accounted for by the fact that the Hôpital Bichat was not open for the reception of cholera patients the second time until the 11th of November, when the violence of the epidemic had commenced to abate; for it is a fact well known in the history of cholera and illustrated in the epidemic in question, that the mortality is much greater at the commencement of epidemics than later. It has happened on more than one occasion that all the cases occurring during the first days of an outbreak have terminated fatally.

The cases observed commenced in one or the other of two ways: either abruptly, with vomiting and abundant diarrhœa, or insidiously, with the symptoms of a progressive intestinal catarrh, great depression, and tendency to chilliness. The cases beginning suddenly showed ten recoveries and eighteen deaths, a mortality of sixty-four per cent. The cases preceded by premonitory diarrhœa afforded twenty cures and fifteen deaths, a mortality of forty-three per cent. It would thus appear that abruptness of the attack in cholera is associated with intensity in its evolution. Lermoyez states that all the patients who perished in the course of a few hours after admission to the hospital algid and asphyxiated had been seized abruptly in the preceding night or even on the morning of the development of the characteristic complexus of symptoms. It must not, however, be overlooked that the premonitory diarrhœa may of itself constitute a complete form of mild cholera, followed by recovery. Over and above the frequent form of termination by asphyxia and algidity, and of the usual recovery by a gentle and moderate reaction, Lermoyez observed two other modes of termination of unlike frequency, but of like gravity, as in both all the cases perish. One is the so-called typhoid reaction described by Griesinger, with progressive augmentation of temperature exceeding 104° F. in the axilla, drowsiness deepening to coma, delirium sometimes furious, flushing of the face, respiration and a vigorous circulation, a form rarely seen, and then only, as a rule, in alcoholic subjects. *Post mortem*, notwithstanding the symptoms during life, he found not the slightest trace of cerebral or meningeal congestion; in fact, only the characteristic intestinal lesions and congestion of the kidneys and lungs. In the second and more numerous group the patients recovered from the algid period and entered unsatisfactorily upon the period of reaction, only to grow cold again after a time and become again cyanosed, to suffer from suppression of urine, from dyspnœa, finally to die in the algid state of cholera from four to six days after the first development of the cold symptoms. These cases occurred not in alcoholic subjects as a rule, but rather in those who were anæmic and debilitated. This prolonged quasi-chronic form of cholera, with partially developed algidity and cyanosis, was likewise always fatal.

All the cases not ushered in by prodromic diarrhœa began suddenly with vomiting and uncontrollable dejections, even in some instances to the extent of fifty movements an hour. It was impossible to determine which of these two symptoms occurred first. Cramp was always some hours, often half a day, later; it invariably affected the legs and thighs, less often the arms, frequently the abdominal and thoracic walls. The cramp of the abdominal walls aggravated paroxysmally the constant colic experienced by the patient; the cramp of the thoracic walls accelerated the tendency to asphyxia. The muscular cramps of the limbs ceased spontaneously in from twelve to eighteen hours, even in fatal cases. During the period characterized by cramp, the slightest voluntary movement, a pressure, sometimes a touch, sufficed to excite it, so that

the patients found immobility the best remedy for their sufferings. Moderate percussion of an affected muscle during the interval between two attacks of cramp invariably excited a cushion-like, transverse thickening from muscular contraction, which lasted some minutes. This phenomenon was also observed for a short time after death in patients dying in the period of asphyxia.

Reaction was always announced by increased volume or return of the pulse, which became at the same time more rapid. On the other hand, thermometric observations furnished but vague and frequently contradictory signs. In truth, the condition of the pulse appeared at all times to furnish the best indication of the patient's general state.

With reference to the other symptoms there is little to say, except that, among them, anuria and thirst were the most constant; that during the cold stage the patients sometimes experienced an extraordinary sensation of hunger; that aphonia was rare, much more so than is stated in the text-books. Of the sixty-three cases observed, true aphonia occurred in one only; all the others were able to speak if sufficiently urged to do so. Deep injection of the inner segment of the ocular conjunctiva was present in all cases, and is to be accounted for partly by paresis of the orbicularis, partly by loss of elasticity of the skin and the resulting imperfect closure of the eyelids. Finally, as to the mental state of the patients, it was observed that during the period of asphyxia they were indifferent to what took place around them, and only replied to questions put with urgency and in a loud voice, the replies being frequently wholly irrelevant. Patients who recovered had no recollection of what occurred during the cold stage. Some were astonished to find themselves in the ward of the hospital; others had no recollection of the death of patients in neighboring beds; others, again, supposed themselves to have had merely a light attack of diarrhœa, and were astonished at their enfeebled condition. These facts are at variance with the statement of almost all the classical writers that cholera patients retain their clearness of intellect until death.

In several instances the reaction was attended by inability to pass urine, a symptom which disappeared after a few days. Three of the patients were pregnant; of these one aborted at two and a half months, a second in the fourth month; a third, six months advanced, recovered without this accident. These facts are in accord with the rule formulated by Griesinger, that cholera produces almost always abortion, very rarely premature labor.

Three of the patients were seized in the period of reaction with violent colic attended by extremely fetid stools with intestinal hemorrhages. These cases all died. At the autopsy there was found not only the peculiar hemorrhagic colitis described by Niemeyer, but also an extreme cyanotic congestion of the whole intestinal tract, without a single trace of ulceration which would explain the hemorrhage by vascular rupture.

The treatment was, in the main, symptomatic; the two great indications of the cold stage being to warm the patient and to re-establish the circulation of the blood. All forms of external heat were employed. Vapor-baths administered in the bed produced no result beyond that of increasing the sufferings of the patient. Hot baths of mustard-water appeared to do better. Some of the patients were placed for one minute in water of a temperature of 40° C. In other instances the patients were placed in baths of 34° C. and allowed to remain five or six minutes, during the course of which time the temperature of the water was gradually increased to 38° C. Both of these methods appeared to be followed by good results, but the amelioration was transient, not lasting longer than two or three hours. In a few instances, after two or three baths, the cold stage terminated in favorable reaction.

Persuaded of the uselessness of internal medication during the cold stage, Lermoyez and his colleagues administered all medicines hypodermically. Thus given, ether appeared to be of great, caffeine of still greater use. In truth, after some observations, they came to the conclusion that the latter remedy prolonged life in the fatal cases and hastened the recovery in the curable ones. It was administered in doses of twenty to thirty centigrammes every two hours, the formula employed being that of Dujardin-Beaumetz:

℞ Caffeine, 4 grammes;
Salicylate of sodium, 3 grammes;
Distilled water, 6 grammes.
Fiat solutio.

These injections gave rise to no pain; they increased the force of the pulse and favorably influenced the action of the kidneys, in some instances even relieving the anuria during the cold stage. Alcohol, even in large doses, was followed by no good results. Opium and morphine are dangerous remedies, because as long as the individual secretes no urine they accumulate in the organism until, upon reaction, they may overwhelm the patient. Nevertheless, morphia is the only efficacious remedy for the sufferings of cholera. Given in combination with caffeine, its dangers are diminished: first, because of the antagonism of these two remedies, and further because caffeine, by acting on the kidneys, aids in the elimination of the derivatives of opium.

No attempts were made to control the diarrhœa, it being regarded as vain, and indeed almost impossible. Further, as the diarrhœa was for the most part unaccompanied by either tenesmus or tormina, and often appeared to relieve the sufferings of the patient, it was not interfered with. On the contrary, it was often necessary to combat the tendency to vomiting, which is one of the most painful symptoms of cholera. Among those patients who were permitted to drink freely of fluid, vomiting was indeed more abundant, but less fatiguing, than among those restricted in their amount of drink. Patients should be permitted to drink as freely as they wish, and in some instances as much as ten litres a day were consumed. A physician at Dijon, in the epidemic of 1865, placed at the bedside of his cholera patients a bucket of water, from which they were permitted to drink at will. The mortality among his patients was no greater than among those of his colleagues. The most acceptable fluids were found to be fresh and aërated waters. Cracked ice was also a great comfort. External cold was, in some instances, grateful to the patients, and was sometimes employed in preference to hot applications. Counter-irritation to the pit of the stomach and the inhalation of oxygen, as recommended by Hayem in the vomiting in pregnant women, failed to influence the vomiting of cholera patients. Morphine hypodermically controlled it, however. The intolerable dyspnœa of the cold stage yielded only to morphine; oxygen was wholly without effect.

The liquor of Van Swieten was given in doses of forty drachms by the mouth, sixty grammes by injection. If we accept the views of Strauss, that the comma-bacillus by which the cholera-poison is elaborated remains localized in the intestines without, even in rapid cases, invading the tunics, it is of the utmost importance to introduce into the alimentary tube some parasiticide; especially in view of the fact that the failure of intestinal absorption, which contra-indicates the use of other internal remedies, favors the local action of the corrosive sublimate. The liquor of Van Swieten was well borne, apparently diminishing the vomiting, and seeming to be of use as regards the general disease. In the *foudroyant* form it was without action, but in the more protracted cases, where the cold stage continued for a long time, it appeared to influence favorably the course of the disease.

Intra-venous injections of artificial serum during the cold stage were in two cases followed by a result so prompt and so disastrous that this form of treatment was at once abandoned. To sum up the treatment of cholera in a few words, we may say that it consists in—

1. Hot applications and warm baths.
2. Subcutaneous injections of ether and caffeine.
3. The abundant use of the liquor of Van Swieten.
4. The very cautious subcutaneous injection of morphine for the relief of dyspnœa and vomiting.

In a large proportion of the cases, however, medication is useless, and, as has been said of the severest form of cerebro-spinal fever, so in cholera, the first symptoms of the disease are the first evidences of death.

TRANSLATIONS.

Treatment of Variola.—Dr. Reimer (*St. Petersburg. Med. Wochenschrift*) recommends as the best local application in adults Prof. Schwimmer's ointment, composed of olive oil (forty parts), precipitated chalk (sixty parts), and carbolic acid (from four to ten parts). This should be spread on a linen mask and reapplied every twelve hours. The results have been very satisfactory in preventing the development of pustules and keeping the skin of the face free from pitting. In young children

there is some danger of carbolic-acid absorption and poisoning to a greater or less degree.

As regards internal treatment, basing his opinions upon observations made upon thirteen hundred patients, he prefers the salicylate of sodium, given in five- to ten-grain doses day and night. In all his cases under this treatment there was marked improvement by the second day. It was also noted that the rod-shaped bodies in the blood, which have been pronounced to be the cause of the disease, disappeared as soon as the patient came under the influence of the agent; the number of micrococci was also markedly diminished.

Lactic Acid Treatment of Tuberculous Deposits.—Dr. H. Krause highly recommends the application of lactic acid to the laryngeal ulceration and swelling caused by tuberculous deposit. He begins with a ten-per-cent. solution, and rapidly increases it to eighty per cent. A number of cases are reported in which the ulceration was completely cured by these applications, notwithstanding the presence of tubercle-bacilli. In view of the unfavorable course which such cases generally pursue and the failure of all other treatment, the author thinks this is a decided step in advance. He also believes that lactic acid will be found useful in other disorders of the throat.—*Berliner Klin. Wochenschrift*, No. 29.

Insidious Osteomyelitis.—M. Trélat, in reporting to the Congrès de Chirurgie a case of latent osteomyelitis, or "quiet necrosis," as it was called by Paget, directed especial attention to the development of a bone-disease proceeding to necrosis, and the formation of a sequestrum, without the existence of any appreciable systemic reaction. A primary operation of trephining over the external malleolus and removal of dead bone was unsuccessful, but two months later a large sequestrum was removed, and the patient recovered. There were no evidences of syphilitic infection. The disease was thought to be an osteosarcoma before he came to the hospital.—*La France Médicale.*

Sea-Voyages for Consumptives.—Dr. L. Thaon (*Nice Méd.*), at the end of a communication, offers the following conclusions. Sea-voyages for consumptives should extend around the Cape from Europe to Australia, made either by steamer and stopping at the Cape, or, preferably, on a sailing-vessel. During the voyage the lung-patients are generally free from hæmoptysis and from sea-sickness. Sea-voyages are contra-indicated in cases with fever, and in those having diseases of the bowel or larynx. The most positive results noticed are the prophylactic effect upon predisposed individuals, and the increased strength of consumptives in whom the local process has been healed. The sea-voyage can be made to alternate with wintering in the mountains for this class of cases.—*Deutsche Med. Zeitung*, No. 58.

Locomotion of the Brain within the Skull.—The opinion of Luys, that there is a certain amount of locomotion of the cerebral lobes within the cranium, has received confirmation from an observation of Venturi (*Rivista Sperimentale di Freniatria e di Med. Legale*, 1885, No. 11), who found, upon examining the skull of a man who had died in an epileptic fit, that, corresponding with a growth involving the dura mater, there was a depression on the interior of the skull, and a groove, which plainly showed the effects of motion. The brain, he believes, follows the laws of gravity within certain limits in two ways,—first, within its membranes as a mass, and, secondly, through superficial extension of the dura mater. The movements during life appeared to have been principally those of partial turning towards the free side of the hemispheres, in a direction from the front or the back, corresponding with the direction of the principal mass of the brain.—*Centralblatt für die Med. Wissenschaften*, No. 29.

A Contribution to the Treatment of Hysterical Attacks.—Dr. Ruault recommends compression of a superficial nerve-trunk in order to terminate an attack of hysteria. The face being always accessible, he prefers making pressure upon the infra-orbital nerves as they emerge from their foramina; but he has also compressed the ulnar nerve behind the inner condyle of the humerus. [This is better than attempts at compression of the ovaries, but is perhaps no more efficient than the well-known expedient of compressing the nostrils and making the patient breathe through the mouth.—Ed.] —*La France Médicale*, No. 86.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 22, 1885.

EDITORIAL.

THE ATTITUDE OF THE MEDICAL PROFESSION TOWARDS CRIMINALS.

THERE seems to be a growing tendency in some medical circles, at the present day, to regard crime merely as a manifestation of mental disorder: hence the more revolting and ingenious the crime the greater the *prima facie* evidence of insanity. The argument that inebriety also is a disease, a misfortune and not a fault, has been recently sustained with much ardor. From the postulate that outrageous conduct is incompatible with the existence of a healthy mind in a healthy body, the conclusions are at hand (1) that the criminal is naturally deficient in judgment, and (2) that this fact should serve to extenuate the offence, or at least to mitigate the severity of the legal penalties imposed. Unfortunately, the legal profession, like the medical, is not called upon to practise in a community of perfect beings, but each is obliged to adapt its methods to those who vary in many respects from the normal standard. If the descendants of intemperate or diseased progenitors can, while showing sufficient intelligence in managing the ordinary affairs of life, successfully plead irresponsibility as a defence when on trial for crimes they may commit (the crimes themselves giving evidence of skill, courage, and forethought), there is great danger that the laws which have been framed with the express purpose of preventing crime and punishing criminals may utterly fail of their purpose in the courts from want of jurisdiction.

There are several themes connected with this subject which deserve serious consideration. In the first place, is the attitude of the medical profession towards crime, and those who commit offences against law and order, properly represented by certain specialists, who, while they cannot define the limits of variation in cerebral structure entirely consistent with sanity, yet speak very learnedly and positively about "evidences of imperfect organization" and other abnormalities of the "criminal brain" discovered at the autopsy? By this we do not mean to cast discredit upon pathological facts reported by Benedikt and others, but to protest against their hasty application to the problems of sociology.

When such a report is published, the "eminent alienist" enjoys a brief notoriety, but the reaction is injurious both to him and to the profession, inasmuch as to the community at large it involves the imputation that the legal punishment was unjust,—that the victim was not a responsible agent, and should not have been punished at all, but merely secluded for a greater or less period of time. Thereupon the public hastily forms the opinion that physicians can be found who will testify to the insanity of all criminals, and thus medical testimony is brought into discredit. With such comprehensive views of insanity, it is not surprising that the paradoxical doctrine should be maintained by some that "it is right sometimes to hang insane murderers," — a doctrine which would be atrocious and disgraceful to our civilization if, in the definition of insanity, moral irresponsibility were really and essentially involved.

Furthermore, the tendency to regard the criminal as a curious development of social life and as an abnormality inviting scientific study leads to an aberration of humanitarianism, and the prisoner at once becomes the centre of a social sensation, the recipient of gifts and attentions, flowers, books, and friendly calls, and finds

himself exalted into a sort of a hero. For example, the attentions paid to the vile and repulsive negro murderer Rugg, of Long Island, a short time since were disgusting and demoralizing in the highest degree. The hanging of a murderer rarely occurs without the guilty wretch posing as a Christian martyr, hypocritically forgiving those who carry out the sentence of the law, and dying in full confidence of a blissful immortality. Does not the responsibility for this state of affairs rest partly upon the medical profession, which lends its authority in support of the opinion that the criminal is a victim and that he is unjustly punished?

Finally, the sanitation and discipline of jails and prisons have been carried to such perfection that they are no longer regarded with dread by the lawless class, whom we find constantly committing crime in order to obtain a comfortable home, where food and lodging and medical attendance are provided and very little is required in return. Is there not ground for the suspicion that some of our model prisons may really be regarded as institutions for the encouragement of crime? The nature of punishment, its effects upon the individual, and its practicability, as well as the minor details of prison-management, are subjects coming within the domain of sanitary science, and the profession should not hesitate to entertain and express positive views, based upon observation and sound judgment, on these important topics.

SOME RESULTS OF PUBLIC HEALTH WORK.

THE backwardness of sanitary work in this country is in no small degree due to the contempt with which many prominent physicians view the labors of sanitarians, both official and voluntary. To such we commend a short summary of the results accomplished in the State of Michigan, which accompanies the report of the health of that State during July, 1885. Comparing the prevalence of diseases for July, 1885, with the average for the same month for seven years previously, it is found that there was a marked diminution in nearly all diseases reported, this being most notable in such as are believed to depend largely upon insanitary surroundings. In intermittent and remittent fevers, dysentery and diarrhœa, cholera infantum, consumption, and typho-malarial fever the decrease varies from five to twenty-one per cent. In only two diseases, cerebro-spinal meningitis and tonsillitis, was there a slight increase over the average.

These results are attributed by Dr. Baker, the Secretary of the Michigan State Board of Health, to the sanitary revival brought about by the apprehension of cholera; but they are probably largely due to the systematic manner in which sanitary principles and methods have been impressed upon the people of Michigan through the medium of popular sanitary conventions, which are nowhere so successful as in that State. Other communities nearer home could well afford to take a lesson from Michigan in this matter.

LEGAL STATUS OF MEDICAL WORKS IN COURT.

THE vexed questions as to the admissibility of medical books in court, and the extent of the credence to be given to them, frequently come up for new adjudications and interpretation.

The most recent of the cases on the subject is found in one of the California courts, where it was held that medical works could not be read by counsel to the jury to prove the nature and probable effect of personal injuries. It was claimed that the common-law rulings had been changed in California by the adoption of a new Code, which declared that "historical works, books of science or art, and published maps or charts, when made by persons indifferent between the par-

ties," were "*prima facie* evidence of facts of general notoriety and interest," and the question was whether this legislation made medical books competent evidence. The discussion centred around what could be termed "facts of general notoriety and interest," and whether medical investigation and experience, as recorded in text-books, come under this head. It was decided that they do not, but that such facts "include the meaning of words and allusions, which may be proved by ordinary dictionaries and authenticated books of general literary history, and facts in the exact sciences founded upon conclusions reached from certain and constant data by processes too intricate to be elucidated by witnesses when on examination." Thus, mortuary tables, chronological tables, recognized standards of weights, measures, and currency, are admissible. The rule as to medical works is thus stated: "But medicine is not considered as one of the exact sciences. It is of that character of inductive sciences which are based on data which each successive year may correct or expand, so that what is considered a sound induction last year may be considered an unsound one this year, and the very book which evidences the induction, if it does not become obsolete, may be altered in material features from edition to edition, so that we cannot tell, in citing from even a living author, whether what we read is not something that this very author now rejects."

THE PERSONAL EQUATION IN PRESCRIBING.—Dr. Roberts, in his address on Therapeutics before the British Medical Association, states an undoubted truth, when he declares that in resolving a problem in dietetics for the sick the physician "often ends by taking his own digestive organs as his type, and prescribes for his patients according to the likings and dislikings of his own stomach." It is especially noticed in the use of stimulants that the personal equation strongly influences the judgment. This is so true that the lecturer has evidently not himself been quite able to escape from it.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

CLEANSING of Great Cities.—It should not be without interest to some of the not-too-clean cities of America if we give some details of a novel project in Paris. Under Napoleon III., gigantic works were carried out here that greatly improved the sanitary condition of this city. Among the works was the plan carried out of directing the sewage out to Gennevilliers, to be used for irrigation purposes. Lately it was proposed to continue and extend this system, and to do away with cesspools by allowing *all* to go into the sewers and then direct it out to large plots of ground in the forest of St.-Germain and to the plains below Créteil. At present the system is divided. More than three-quarters of Paris houses have cesspools, which are emptied by the odorless method with steam-pumps; the other quarter of Paris, the newer houses, have the *tinette* system. These tinettes are large zinc receivers, about six feet high by two feet in diameter, round in shape, that are placed in the cellar under the pipes coming from the water-closets. The pipes empty into the tinettes, and these last have a pipe, allowing the liquid parts to run off into the sewers and retaining the solid matter. Carts come in daytime, detach the full tinette, and put an empty one in its place. This causes no smell, and is the best system so far invented.

This tinette system works so well that efforts have been made to pass a law to make all owners use it; but a slight calculation showed that it would require too many carts. Dr. Brouardel said it would take as many horses and carts to carry the tinettes and change them at each house weekly as there were omnibuses and horses in Paris,—a procession of these carts, for instance, like all the street-cars of Philadelphia, and going about as often.

To return to the project of placing these matters on ground near the city. The engineers maintained that the earth would purify everything. They forgot, however, that hygienic science has undergone a great revolution in these late years. M. Pasteur and his disciples have demonstrated that endemic and epidemic maladies are caused by germs, some of which have been found to live at least twelve years underground; also that the germs of typhoid fever and cholera, at least, are contained in alvine matter. The question then arises whether vegetables grown in fields thus saturated with an infectious liquid would not be contaminated, and is there not danger of pollution of wells and springs by filtration through the subterranean sheet of water?

The only remedy suggested by these facts is to remove the fecal matter from the houses by a special system of canalization to some distance beyond the city, and there have it *treated at a heat of* 150° *C., so as to destroy all microbes.* This plan is now recognized as the safest. Erect great furnaces and burn it all. After this complete disinfection, night-soil would still be useful for agricultural purposes.

Amygdalotomy.—Dr. De Saint-Germain gave some very practical remarks on this common operation that we are so often called upon to perform in the winter season. He said, "You noticed that I just refused, notwithstanding the entreaties of the parents, to perform the operation of extirpation of the tonsils in this child, although I performed it in two others. The fact is that this simple operation is not without danger in certain cases. How shall we know when not to operate? Well, there is a rule that you should never forget: it is never to cut the tonsils until they touch each other in the median line. It has been said that a child that has enlarged tonsils is subject to phthisis or to get diphtheria, but it is not true; large tonsils don't exercise such an influence over the general health. There are cases when you should refuse to operate. When you see the mucous membrane inflamed, and you see white spots, don't operate; wait, and under treatment it will regain its usual rosy color. Ought the tonsils to be cut at all ages? No. If the child is under two, wait, for fear that a loss of blood, however slight, may weaken the patient. From four years of age up to twelve is the period for operating. At twelve, if it is a girl, wait, for very often at this period or later menstruation may come on, and it will modify the condition so that no operation will be needed. From seventeen to nineteen, and in adults, hemorrhage may be feared. Here always remain at least an hour with them after the operation. As a last counsel, don't operate at all when there is an epidemic of diphtheria. Having decided to operate, what are the means used to perform the operation? All of you know the amygdalotome, so I won't describe it. I wish to say that I think it will pare or scrape the tonsil, but it will not extirpate it, so that some other doctor has often to be called in to complete the operation that you have left unfinished. It is, besides, an instrument that is difficult to keep clean, and I have seen the knife-edge break off and fall into the pharynx, so that I do not use this instrument at all. I use concave bistouries. The convex side is put against the adherent portion of the tonsil, and the concave side is towards the base of the tongue. Right and left instruments are used. With these instruments you can pluck the gland out of its socket completely, but you need a special pair of forceps. These are long pincers, made so that they will not tear the substance, with triangular teeth that are flat, with a sort of gutter between, exactly like a small waffle-iron, from which you have so often enjoyed eating the cakes. Place the pincers horizontally, and the child will instinctively open its mouth wide, so that nothing remains but to cut the tonsil."

Treatment of Eczema.—M. Guibout is giving a series of lectures on treatment of skin-diseases. He thinks that the herpetic diathesis is a reality, and that a general treatment is indispensable, without which no cure can be assured. The local or external treatment is, however, important. Eczema being essentially an inflammatory trouble of the skin, emollients and antiphlogistics are called for. Greasy substances must not be used, because the most anodyne of pomades are subject to an acid fermentation and become irritating. For the same reason, poultices of linseed-meal are bad. All cold baths, both alkaline and sulphur, will irritate the skin, so that most mineral waters and sea-baths will only augment the irritation.

The treatment should be essentially antiphlogistic. Poultices of potato-flour, well cooked into a jelly, and applied wet, nearly cold, renewed three times in twenty-four hours, are good. Give warm baths, with bran or starch in the water (*cooked starch*). Lotions must be always warm, never cold. No local irritation or rubbing to be allowed. Take away all flannel or rough linen. These are, in short, the general rules to be observed; but the treatment must differ as to the kind of eczema and as to its seat.

In all the hairy parts there is an aggravation of the trouble, so that the hair must be cut short or shaved. On the face use a mask of rubber to apply the poultice. In the genital region insist on the horizontal position, with the legs apart. In the inferior members they should be kept a little raised; they must be kept in bed, and never be permitted to hang.

When the surface is very large, it may be rubbed with this liniment:

℞ Sweet almond oil, 100 grammes;
Lime-water, 100 grammes.—M.

After each application, powder the surface with starch-powder that is *not* perfumed. A bath of bran-water given warm every two days should follow.

Treatment of Eczema in Chronic Forms.—Here all is changed; the skin is hardened and its vitality is lowered. Irritants or excitants may now be used; baths of sulphur-water or the alkaline stimulants; frictions with black soap, oil of cade, or lotions of the corrosive chloride (one gramme of corrosive sublimate to five hundred grammes of water is used; a little alcohol may be added to dissolve), or pomade of boric acid:

℞ Acid. boric., 10 grammes;
Petrolati, 100 " M.

Treatment of Psoriasis.—While on skin-diseases, it may be well to give M. Guibout's treatment of psoriasis. Here we reach the acme of irritant treatment, as the trouble is a sort of mummification of the skin and transformation into a sort of shell, dry and crackling, without a shadow of vitality. The indications are to remove the epidermic scales and try to revive the lost vitality. The external treatment consists in friction and baths. The substances employed by M. Guibout are: the oil of cade extracted by distillation from the *Juniperus Oxycedrus*, and next in order pyrogallic acid. The oil of cade gives the best results. The whole of the body is well rubbed with it twice a day with a piece of cloth or flannel; then every other day a bath is given with from five hundred to six hundred grammes of subcarbonate of soda in it. If the treatment with pyrogallic acid is preferred, it should be combined with vaseline (ten to fifteen grammes of the acid to one hundred of vaseline), used in frictions twice a day, and alkaline baths to follow. The pyrogallic acid turns the skin black when exposed to the air; so it must not be used on the face or neck, as it takes a long while to get rid of the color.

Terpine.—This is a binitrate of turpentine in the form of large crystals. Alcohol dissolves fourteen per cent. of it, and this is the usual solution used. Professor Germain Sée has been trying it. He finds that it has a strong action on the bronchial mucous membrane, and that it will diminish the muco-bronchial secretion and stop hemorrhages on the surface of the mucous membrane; in other words, terpine is a sort of bronchial desiccant. The dose is one gramme, or 1 gr. 20. It has great advantages over creasote or tar, is harmless and digestible, and may be employed with success in the hæmoptysis of commencing phthisis, and in the treatment of pulmonary catarrhs and chronic bronchitis. It is certainly the best means of lessening the bronchial hypersecretion; but Dr. Sée holds that the iodide of potassium and pyridine are the best remedies for asthma.

Experiments on Decapitated Criminals.—Some little excitement was created at the Société de Biologie by a war of words between M. P. Bert and Dr. Laborde, who has been making these experiments. M. Bert holds that they are useless, and may be made just as well—indeed, better—on animals. M. Laborde got very indignant that M. Bert, the great physiologist, should act as an obstructionist and prevent important experiments under a pretext that sensibility might come on again. If it was possible, it was an argument in favor of abolishing decapitation. M. Laborde maintained the usefulness and interest of his experiments.

Results of Treatment of Weak Infants.—M. Tarnier presented to the Académie de Médecine two infants which he had raised in an artificial "*couveuse*," or hatching-machine, which was kept at a temperature of 32° to 37°. They were fed by introducing into the baby's stomach a sound (No. 16 urethral) which had a small glass funnel attached to it. After many trials, Dr. Tarnier found woman's milk to be the best food. As a rule, eight grammes were injected every hour. Later, cow's milk was alternated with the mother's milk. As soon as the milk is introduced into the stomach the sound must be withdrawn, or vomiting will follow. Both these children were born before term, one before the seventh month and one about the sixth month.

Prophylaxy of Cholera by means of Hypodermic Injections of Pure Cultures of the Comma-Bacillus.—It has come out that Dr. Ferran's communication to the Academy of Sciences was to the effect that the vaccine used was simply a pure culture of the comma-bacillus in a nutritive soup, and the degree of virulence was in direct relation to the sample of real cholera that the bacilli were taken from. The best vaccine was the most virulent; that is, the one that produced the greatest number of cases of experimental cholera in the persons vaccinated. The dose employed was a cubic centimetre of the culture. The symptoms produced did not need any therapeutic interference, and if needed a solution could be used to act when it was diluted. Three inoculations were given, one every five days, in both arms about the region of the triceps. It is thought that this will procure an immunity of at least a period of two months. There is nothing new to add in reference to Dr. Ferran's inoculation. All await his promised complete work that he says he intends to present to the French Academy. In the mean time the cholera is making fearful ravages in Spain, and his method is much discredited.

Treatment of Lumbar Neuralgias coming from Affections of the Uterus.—Dr. Naudin recommends the following:

℞ Chloroformi, 10 grammes;
Ætheris, 25 grammes;
Tinct. opii, 6 grammes;
Glycerini, 90 grammes. M.

S.—Rub on the painful part morning and night.

Powder for Pyrosis.—(Dr. Peret.)

℞ Sodii bicarb., 2 grammes, 50 centigr.;
Pulv. cretæ, 1 gramme;
Ext. nucis vomicæ, 10 centigrammes. M.

S.—Divide in ten powders; give one s. t. d.

Injection in a Case of Blennorrhagia complicated with Hæmaturia.—(Dr. Brodet.)

℞ Chloral. hydratis, 4 grammes;
Aquæ destill., 250 grammes. M.

S. Three injections daily.

These injections are not painful.

THOMAS LINN, M.D.

PARIS, FRANCE, August, 1885.

BOSTON.

PENSION-BOARD CHANGES — A GOOD APPOINTMENT — SUMMER EXCURSIONS FOR SICK CHILDREN.

AMONG the matters of special interest to the medical profession in this city at the present time are the recent changes in the Board of Pension Examiners. For some time past there have been unfortunate occurrences in connection with this Board which have undermined the popular confidence in it. A former member, a physician, was charged with exacting a premium from persons whose claims to a pension he allowed, under the form of a "subscription" to shares in the stock of a worthless corporation. This matter is still before the courts, one trial having occurred which resulted in a disagreement of the jury. Since this affair the Board has been reorganized. One of the early appointees of Commissioner Black was a man whose character was such that the other members remonstrated and presented to the Commissioner charges embodying their objections to serving on the Board with this man. These charges, it is said, were referred by the Commissioner to General Butler, the counsel for the accused, who naturally reported in favor of his client, and the appointment was made. Drs. Whittier and Gavin, of the Board, at once presented their resignations.

Dr. Prince, a Democrat and son of a former mayor of Boston, was then appointed; but he too at once refused to serve with the man in question. Naturally, much comment was excited, and questions were freely asked as to why these men, all of excellent personal and professional reputation, were unwilling to serve. Dr. Whittier has replied with an open letter to Commissioner Black, making public the charges which he had previously made in private, and which he accuses the Commissioner of never having examined further than by a general reference to an interested party. These accusations, which are very definite and direct in character, implicate the appointee in fraudulent action connected with a case of so-called "graveyard" insurance. The methods of work of the Examining Board are such that each member is responsible conjointly with his associates, so that any wrong-doing on the part of one member can easily compromise his colleagues. The unpleasant position in which other gentlemen have been placed by the maladministration of one of their associates is abundant reason why any man should feel it necessary to protect himself against similar entanglement. Meantime, the Board has been filled and organized by men willing to serve in connection with the accused member; but no steps have been taken by the pension authorities to investigate charges which, whether true or not, are, so long as they remain unanswered, a constant obstacle in the minds of a large portion of the public to that confidence which should be enjoyed by a Board charged with so great a trust as that involved in the obligation of our country to its infirm and suffering defenders.

The Governor of Massachusetts has appointed Dr. Samuel A. Green, formerly city physician and ex-mayor of Boston, to the position on the State Board of Health, Lunacy, and Charity formerly held by Dr. H. P. Walcott. The fitness of this appointment (if the vacancy must needs have existed) is universally recognized. The great experience of Dr. Green with epidemic diseases and his familiarity with administrative methods will make him an exceedingly valuable member of the Board. By the way, two gentlemen who have served upon this Board, Drs. Walcott and Folsom, together with Dr. S. W. Abbott, at present a member, and Prof. E. S. Wood, of the Harvard Medical School, have recently received the honorary diploma of the Société d'Hygiène of Paris, in acknowledgment of their services in sanitary medicine.

The high temperature which prevailed during the latter part of July showed its customary results in a large augmentation of the mortality from diarrhœal disorders among young children. It is pleasant, in this connection, to note the good work accomplished in a quiet way and at comparatively little expense by the Sea-Shore Home, an institution located at Winthrop, a little to the north of the city. The children of the poor, especially those suffering from enteritis and cholera infantum, may be sent by the dispensary physicians to this home. Nursing mothers are also received with their children. The treatment consists, of course, chiefly in securing proper food, and the tonic influences of the Atlantic Ocean do the rest. Last year one hundred and thirty-five children, comprising, as a rule, the sickest cases to be found in the dispensary districts, were received, and there were only two deaths, one being from heart-disease and the other from ecthyma. Rev. E. E. Hale, who is the president of the board of officers, urged in his last report that the city government utilize the steamer which makes daily trips to the public institutions situated on some of the islands in the harbor, to take, on the recommendation of the city physician, such sick children as would be likely to be benefited by a few hours' sail. This recommendation, as its maker foresaw would be likely to be the case, from requiring the cooperation of several distinct boards, has not been carried into effect. Meantime, the other philanthropic enterprises which do so much to mitigate the sufferings of the poor and the sick during the midsummer heats, such as the "Country Week," the Flower Mission, the Poor Children's Excursions, and the Free Rides for Invalids, are being well supported.

C. F. W.

BOSTON, August 1, 1885.

WASHINGTON.

MIDSUMMER DULNESS—THE WALES COURT-MARTIAL—THE AMERICAN PUBLIC HEALTH ASSOCIATION.

WASHINGTON, August 13, 1885.

IN midsummer the capital of the nation is very quiet, even dull. Everybody who can get away leaves the city, and, as its business depends largely upon the official class, who are mostly out of town when the administration is taking its summer vacation, news of all kinds is excessively scarce. Professionally very little is doing, and almost the only disease the doctors have to treat is Washington malaria.

The verdict of the court-martial in the case of ex-Surgeon-General Wales has, however, caused somewhat of a sensation. It will be remembered that Dr. Wales was tried by court-martial and found guilty of inefficiency and neglect of duty because he failed to discover the rascality of several of his clerks, by which the government was swindled out of a large amount of money, said to be over a hundred thousand dollars. The court failed to connect Dr. Wales with any of the frauds, but convicted him on a technicality, and imposed what is considered here a very severe penalty, out of all proportion to the offence. The high professional character of the late Surgeon-General, and his successful labors for the advancement of the medical staff of the navy, did not avail him ; in fact, they seemed to render his offence the greater in the eyes of the court, which apparently held the opinion that the duties of the Surgeon-General were simply to watch his subordinates and prevent their stealing.

It seems by the confession of the principal criminal, the late chief clerk of the Bureau of Medicine and Surgery, that the frauds had gone on undetected for years under Dr. Wales's predecessors; but the court refused to go into the inquiry further than concerned the latter's administration. To outsiders it looks very much as if Dr. Wales were the victim of a systematic persecution, of which the late Secretary of the Navy was the chief promoter. It is well known here that there was a violent personal antipathy between the two men, which may have been partly political, but is believed to have largely arisen from social antagonisms. The penalty imposed by the court is suspension from rank and duty for a period of five years. It is said that Dr. Wales's counsel will not rest satisfied with this verdict, but will appeal the case to the Supreme Court.

The next annual meeting of the American Public Health Association will be held here during the second week in December. Dr. Smith Townsend, the health officer of the District, is chairman of the committee of arrangements, and has already appointed his subordinate committees. A good hall has been secured in a central and easily accessible location, and other measures have been taken which promise to make the meeting one of the most successful that has ever been held.

G. H. R.

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PROCEEDINGS OF SOCIETIES.

BRITISH MEDICAL ASSOCIATION MEETING—ABSTRACTS OF THE ADDRESSES.*

THE Fifty-third Annual Meeting of the British Medical Association was opened on Tuesday, July 28, at Cardiff, South Wales.

Thirty-two years had elapsed since the Association last met in Wales, and the members remarked with pleasure upon the "almost American speed of progress" exhibited by the Welsh city during the intervening period. From 1800 at the beginning of the century, and 10,000 in 1841, the population had grown to 86,000 in 1881, and 100,000 in 1885. This is due to the enterprise of the Marquis of Bute and the development of the great coal-fields of South Wales.

During the same period the membership of the Association had increased from eighteen hundred to over eleven thousand, while its financial condition may be judged by the marked favor with which the assembly received a proposition to expend at least one hundred thousand dollars in the erection of suitable buildings to accommodate the business of the Association in London.

The attendance this year was large, the meetings fairly harmonious, the arrangements admirably designed and carried out, and the pleasure of the members still further enhanced by the fine weather which prevailed during the convocation.

The opening address was delivered by the President, Dr. W. T. Roberts, of Cardiff. Our own Association might with propriety adopt the graceful custom of electing as President the nominee of the local society in whose district the annual meeting is held.

After extending a hearty welcome to the visitors, Dr. Roberts gave an interesting sketch of Cardiff and vicinity, touching upon its history, the objects of interest to be seen, and adverting to its remarkable growth. The increase in material prosperity has brought with it an increase in the consequent dangers. The important trade carried on between this city and the Spanish ports exposes it to the cholera epidemic now desolating the Iberian peninsula. The great importance of sanitary science and the happy results of its intelligent application he insisted upon, while the lay Boards of Health came in for some well-merited abuse. Speaking of education, the President regrets that Cardiff (a town ranking with Scranton) has no medical college of her own! Following this comes the usual retrospect of the advances in modern medi-

* Taken mainly from the report published in the *British Medical Journal.*

cal science, the speaker confining himself strictly to the beaten track, using the regulation illustrations,—anæsthetics, instruments of precision, the microscope, etc.

The topics discussed in such addresses are too well worn to allow of much variety in the subject-matter, but Dr. Roberts succeeded in presenting them in a more acceptable manner than usual.

The Address in Therapeutics was delivered by Prof. W. Roberts, of Victoria University. Recognizing the impossibility of dealing adequately with the entire subject in an hour's address, the speaker wisely confined his remarks to the single topic of Dietetics.

Of all the duties devolving upon the physician, none are so common as that of regulating the diet of his patients. Perhaps it is because the duty *is* so common that so little systematic study is given to it. Most physicians end by adopting their own digestive status as the norm to which that of their patients ought to conform.

Instead of basing our ideas exclusively upon the results of studies upon the physiology of digestion and nutrition, we should start from observations on the habits of mankind, especially of those races whose success in the battle of life has been most decided. Hence the diet which natural selection has approved the best is that of the wealthier classes of Western Europe, including the use of cereals, legumens, fresh vegetables and fruit, animal foods, and the systematic consumption of alcoholic beverages, tea, coffee, and cocoa.

Individual peculiarities must modify this broad principle, and the extremes of life furnish exceptions so general as to constitute a second rule.

Sex also must be considered, women consuming less meat, less alcohol, and more bread and tea than do men.

The speaker lays down the law that we must not depart from the general dietetic customs of the country without the clearest proof of necessity, holding that the persistent use of alcohol, for instance, is conclusive proof of its utility, though we, in our ignorance, may be unable to specify it with precision.

He divides sick-diets into two classes,—as the subjects can or cannot partake of solid food.

In the first class he advises that the usual diet of health be not altered needlessly, forbidding injurious articles only, and allowing the numberless variations which characterize the diet of the most successful classes. We should lessen the amount rather than forbid utterly the use of customary viands. Fruit and vegetables should rarely be tabooed.

Dr. Roberts gives the results of some experiments upon the effects of the common beverages upon digestion. Strong liquors had little effect in retarding salivary or peptic digestion, if diluted to the usual degree, unless in intoxicating doses. They stimulate the secretion of digestive juices and increase the muscular activity of the stomach. Wines interfere with salivary digestion unless neutralized by alkalies, such as Seltzer. All wines interfere with peptic digestion, although they stimulate the secretion of gastric juice and the contractions of the muscular walls of the stomach. Champagne is less injurious than still wines, from the mechanical action of the gas which permeates the food-mass. Tea completely inhibits salivary digestion in any strength. This action is due to the tannin, and no method of preparation gets rid of this objectionable ingredient. Coffee and cocoa do not affect salivary action. It is best for tea-drinkers to eat first, and only partake of the cheering cup before rising from the table. This also insures thorough mastication and insalivation.

On peptic digestion the effects of tea, coffee, and cocoa are the same. All three retarded it, if the proportion of the beverage in the digestive mixture exceeded twenty per cent. of a five-per-cent. preparation.

For the second class the foods recommended are peptonized milk, cold-made meat-infusions, beaten eggs, and gruels fortified by the addition of one-eighth the weight of ground malt. So completely has beef-tea fallen from its high estate that it is recommended to use the remnant of meat-fibre which was formerly thrown away, but which is now to be beaten into a paste, flavored, and eaten.

Instead of the proprietary articles known as infants' and invalids' foods, of unknown composition, it is recommended that the medical attendant shall make up foods to suit his cases, mingling wheat, oat, barley, maize, or lentil flour with malt, as he sees fit, with soda, pancreatin, or pepsin, as may be needed, and to be prepared under his personal supervision.

Dr. T. J. Dyke, Medical Officer of Health for Merthyr-Tydfil, delivered the Address in Public Medicine.

He gave a very succinct account of this parish,—its rise as a coal-producing district, and its sanitary history. In 1849 it had no drainage, no water-works, no provision for the removal of garbage or excrement. The death-rate was 332 per 10,000; that of children under one year, 804.

In 1850 a Board of Health was formed; paving, drainage, the removal of house-refuse, and the provision of an adequate water-supply were gradually accomplished. By thirty years of sanitary work the death-rate has been reduced to 232 per 10,000; that of infants to 50; that from phthisis from 38 to 18½. Still, the death-rate remains high. Much of this is due to the cold, wet climate, and to the hardships incident to the miner's life, which predisposes to catarrhal affections.

The sewage of the city is disinfected by being diffused over four hundred acres of

land, prepared after Dr. Frankland's method. The effect is that water flowing from this filtration-area is purer than the Thames water supplied to London for drinking.

The water-supply of Merthyr-Tydfil is not yet free from impurity, and Dr. Dyke recommends that it be passed through filters of unglazed porcelain at the source of supply, and, to prevent any subsequent pollution, that the water be not allowed to come in contact with the air again until drawn from the house-tap.

The sewers are ventilated on the same plan as is used in the ventilation of mines. Shafts thirty feet high were built at the summits of main sewers for the outlet of sewer-gases, while at the lowest point of each sewer ventilated an inlet was provided for fresh air. This plan proved effectual.

The Section of Medicine was opened with an address by its President, Dr. Samuel Wilks.

After alluding to the changes in medical methods, due to the prevalence of the germ theory, he touched upon the compensating actions of the vital organs in health and disease; abnormal growth of less vital parts; the varying and intermittent activity of organs, their condition during sleep; and the repair of destructive action by the production of new tissue of the lower grades.

The Section of Surgery was opened with an address by Prof. E. H. Bennett, of Trinity College, Dublin. His remarks were confined to the subject which engrosses most of his attention,—injuries to the skeleton.

At the outset he deprecates the study of rare forms of injury, and urges the collection of large numbers of cases of ordinary injury. As an example, he referred to his collection of 100 specimens of Colles's fracture, of which 48 bore evidences of having been impacted, while 52 did not.

So also his extensive collection of fractured ribs shows that when broken by indirect force the fragments are never thrust outwards, though this is the common teaching.

A study of a number of fibulæ showed that fracture in the upper third was not an uncommon occurrence, though not noticed by Malgaigne or Pott. The cause is usually a sudden wrench when the foot is fully extended. Another injury which has escaped these acute observers, to be revealed by the method advocated, is that of oblique fracture of the metacarpal bone of the right thumb. It has probably been treated as a subluxation. It is caused by a fall. Pressure on the base of the bone readily elicits crepitus.

The Section on Obstetric Medicine was called to order by Henry Gervis, M.D., of St. Thomas's Hospital.

Speaking of the general lowering of the death-rate in England, he mentions that the deaths from puerperal fever fell from 60 per 100,000 in 1870 to 55 in 1876–1880. The decreased mortality he attributes to early use of the forceps, induction of premature labor in deformed pelves, the better treatment of post-partum hemorrhage, and, greatest of all, the use of antiseptic methods after, and particularly during, labor. The more perfectly germs are excluded, the less will be the death-rate, while cleanliness, good surroundings, good health, etc., merely lessen the probability of infection and increase the patient's power of resistance.

He inculcates the necessity of washing the hands with carbolized water before making examinations, sponging out the vagina with the same preparation before and after the entrance of hand or instrument. In placenta prævia it is recommended to mop the uterine surface from which the placenta has been removed with perchloride of iron solution. In the management of the third stage Crédé's method is approved, from the antiseptic standpoint.

Careful inspection of the vulva should be made after every labor, and any tear, however slight, treated antiseptically. The cautious use of mercuric chloride solution, 1 to 2000, for irrigation, is recommended. Boracic acid, 10 gr. to the ounce, is said to be more soothing for the inflammation attendant upon lacerations.

The increased proportion of deaths from cancer is noted with regret. Early extirpation is urged, supported by many authorities, and to aid in the early diagnosis the use of the microscope is pressed. Dr. Gervis admits the heredity of cancer in a way which few would care to do at present. In claiming heredity and environment as the two ruling influences in the evolution of disease, we have another proof of the rapidity with which the system of Darwin is being adopted as the corner-stone of modern science.

The Section of Public Medicine was opened by an address from the President, Dr. David Davies, Medical Officer of Health for Bristol. The threatening aspect of the cholera-epidemic first engaged his attention.

It is greatly to be regretted that the disputes between the microscopists are still unsettled. However, this has not deterred the government from instituting a rigid inspection of vessels arriving from infected ports, nor from putting the exposed districts into the highest possible state of sanitation.

The serious detriment to the value of mortuary records which results from the ignorance of those who sign them is acknowledged, but no means of remedying the evil are suggested, unless it be a return to the apprentice-system.

The suggestion was made that the interests of the public health should be upheld in Parliament by the appointment of a minister as head of the department.

Another pressing need of the profession is a government institution for conducting pathological and other investigations. Such an institution would be a most handsome ac-

knowledgment of the brilliant work of Dr. Koch.

Dr. D. Yellowlees delivered the opening address to the Section of Psychology. He chose as his subject "The Causes and Prevention of Insanity."

The causes are divided into two groups: those arising from the conditions pertaining to the person, and those which come by inheritance. They often coexist, though the personal causes are often effective without the aid of inherited tendencies.

Injury, exhaustion, anæmia, or irritation of the brain due to disease of that organ or of other parts of the body may cause insanity in any individual without the aid of hereditary predisposition.

The speaker raises his voice in protest against the reckless disregard of the laws of brain-health shown in the rush and hurry of our modern high-pressure life. Even worse is the effect of alcohol and sexual excess, the tendency to which may be hereditary or acquired.

The emotional causes, in most cases, are effective only where the nervous predisposition is inherited.

This predisposition may never be developed into insanity, or it may show itself in paralysis, epilepsy, neuralgia, asthma, diabetes, hysteria, chorea, drunkenness, crime, or genius. Persons thus predisposed should be assured that these affections are by no means inevitable; but they should sedulously avoid the exciting causes and keep themselves in good general health. Overwork of the brain must be tabooed vigorously, frequent holidays taken, a mild country life, due exercise, and plenty of sleep.

The ranks of the insane are recruited from the untrained and ill-balanced, whose emotions are not subdued by wise self-control and habitual moderation. Injury is inflicted on many by the Procrustean bed of the public school, where all brains are expected to absorb the same daily dose of facts.

Especially with girls of the better class is the evil of our educational system shown. With their minds stuffed with all useless knowledge, marriage finds them ignorant of the duties of a wife, a mother, or of the mistress of a household. The question of marriage in those predisposed to neurotic disease is a most vital one. If the mate chosen be of well-balanced mind and free from neurotic tendencies, all may be well. But these people gravitate towards each other singularly, and, as the choice is made by feeling and not by deliberate judgment, our counsels are usually disregarded. Finally, as the greatest of safeguards comes the faith of the Christian in the unseen God. If melancholy takes a religious dress, the symptom is often supposed to be the cause, and the case is erroneously called religious insanity. Religious excitement in emotional persons certainly does sometimes produce emotional insanity; but generally this follows views so distorted from true religion as to be but a libel on its name, while "there is no security for conduct, no strength for duty, no support in sorrow, to be compared to that which true religion affords."

The President of the Section of Ophthalmology and Otology, Dr. Henry Power, delivered an address on Progress in Ophthalmology.

The first English work published on the eye was by Richard Banister, in 1586. The contrast with the cyclopædic works of Graefe and Saemisch is striking. The development of the specialty has been such as to create subspecialties within it. More than ever is it necessary that, before beginning the work of a specialist, the possession of a broad knowledge of medicine and surgery should be acquired by years of public and private practice.

Among the recent advances in this special province the first mention is made of Dr. McKeown's efforts to lessen the prevalence of ophthalmia neonatorum by instructing the laity as to its nature and treatment.

Speaking of new remedies, jequirity and duboisin are disapproved of, eserin and homatropin received with favor.

Cocaine inaugurates a new era. The speaker omitted, however, to mention the secondary dilatation of the vessels caused by it, and also the occasional occurrence of panophthalmitis after its use.

The researches of Hoeltzki show that eserine causes a primary increase and subsequent reduction of the intraocular tension, while atropine produces precisely the opposite effect.

The action of iodoform in acute inflammations is praised.

The opening address in the Section of Pharmacology and Therapeutics was delivered by Professor Fraser, of Edinburgh. After sketching the rise and progress of the art, the speaker emphasized the distinction between observations in health and in disease.

The progress of pathology has not as yet contributed conspicuously to that of therapeutics, though in many cases the therapeutical uses of agents still await the explanation which can only be afforded by an advance in pathology.

Two methods of study, he said, are open to us. The first, observation of the effects of remedies in disease, is open to so many sources of error that centuries of labor have produced little unquestionable result. But where pathology has revealed the essential nature of disease, pharmacology must produce the remedy. The facts added by this means to our stock are of peculiar value, because they are based on indisputable evidence. Vivisection should be continued, as the only means whereby therapeutics can be established on a sure foundation.

Professor Fraser further recommends that in the schools pharmacology should be severed from materia medica and pharmacy, and should be taught in the final years of the course. It might be conjoined with therapeutics, mainly for the purpose of emphasizing the distinction between them.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held June 24, 1885, the President, JOHN A. WYETH, M.D., in the chair.

CONGENITAL LIPOMA OR CIRCUMSCRIBED ELEPHANTIASIS.

Dr. A. JACOBI presented a child aged eight months, whose mother was sixteen years old. The child at birth had a tumor on the outer aspect of the lower third of the leg, which at the present date was a little larger, and measured about five centimetres in its longitudinal diameter, and extended about a third of the distance around the leg. It was soft; the skin seemed thickened and could not be lifted above the mass, whose surface was slightly above that of the surrounding tissue. The diagnosis lay between congenital lipoma and congenital circumscribed elephantiasis. The tumor was not encapsulated nor lobulated. A positive diagnosis would probably be reached should he have an opportunity to examine a part of the tumor under the microscope.

The PRESIDENT asked if it might not be a congenital sarcoma. He had seen one case of congenital sarcoma, occurring in a boy, who had a small apparent reduplication of the skin on the chin, which after a year and a half grew rapidly, and the child died, when past two years of age, of an enormous sarcomatous growth.

Dr. JACOBI thought the peculiarities which we would expect to see in a sarcomatous tumor would now be apparent, were this a case of that disease.

ELEVEN CASES OF TAIT'S OPERATION.

Dr. W. GILL WYLIE presented another series of eleven specimens of Tait's operation, supplementary to a series of fourteen presented at a meeting in January last. The histories of the specimens were very similar. One patient died, it being a hospital case, the sponges which had come in contact with the contents of the cyst having inadvertently been used for wiping out the peritoneal cavity, leading to septic poisoning. The greatest care was taken to use clean instruments, sponges, etc. As few hands as possible were allowed to enter the peritoneal cavity. The wound in the abdominal walls was as small as was compatible with a safe operation. The patients were under observation for some weeks, some for months, and some for over a year before the operation was undertaken. Nearly all were bedridden,—had had local inflammation and peritonitis. In reply to a question by Dr. Amidon, he said one-fourth or one-third were hysterical. He further said that hysteria was liable to be present in cases of deep-seated cyst of the ovaries. He was losing faith in the so-called ovarian dysmenorrhœa. This trouble was usually due to hyperæsthesia and more or less contraction at the os internum.

The PRESIDENT had become impressed with the importance of two facts in abdominal surgery,—namely, careful cleansing of the peritoneal cavity of all septic matter, and establishing free drainage during the healing process. He had been taught that rupture of the bladder with escape of urine into the peritoneal cavity was sure death, but he had seen one such case in which recovery took place after washing the peritoneal cavity with bichloride solution. In a case of cysts whose contents spilled into the peritoneal cavity, the cavity was flooded two or three times with a weak bichloride solution and sepsis was prevented.

PERINEAL SECTION AND INTERNAL URETHROTOMY FOR STRICTURE AND URINARY FISTULÆ.

Dr. C. H. KNIGHT presented the bladder and penis removed from the body of a man 40 years of age, who died from poisoning by cyanide of potassium. Twelve years ago he had gonorrhœa, and a second attack two years later. Stricture developed, for which he used a sound for many years; there also appeared urinary fistulæ in the perineum, for which he received no treatment until they were divided by Dr. Knight in 1883, at the same time performing internal urethrotomy. Urine ceased to pass by the fistulæ almost altogether after the operation. The sounds were passed for some time. The patient afterwards fell, and as a result a perineal abscess developed, and this was followed by a renewal of the fistulæ. The operation of division and of further enlargement of the urethra with the urethrotome was repeated, and after healing of the wounds no urine escaped by the fistulæ for five weeks, when a slight dribbling occurred. Shortly afterwards he committed suicide.

At the autopsy the posterior portion of the urethra showed an abscess-cavity capable of containing about two drachms. In the immediate neighborhood were four fistulæ, the largest of which readily admitted a 28 sound. The bladder-walls were much thickened, and the capacity of the organ markedly diminished. The appearance of the urethra led him to think the fistulæ resulted from rough usage during the passage of sounds.

RECURRENT FIBRO-SARCOMA OF THE NASO-PHARYNGEAL SPACE.

Dr. R. P. LINCOLN presented a large fibro-sarcoma removed by the galvano-cautery écraseur from its attachment to the naso-

pharynx in a boy of 17. A like tumor, of less size and vascularity, was removed in the same manner about eleven months ago. The patient failed to keep his promise to return and allow of repeated cauterizations of the base, and consequently the present large tumor developed. The case showed the necessity for following up the operation of removal by cauterizations of the base of the growth.

FRACTURE OF THE OCCIPITAL BONE.

Dr. W. P. WATSON presented the occipital bone of a young man who was supposed to have sustained an injury of the head by a stone while out "skylarking." The three following days he was able to work, but on the evening of the third day complained of headache, went to bed, and sent for a physician, who found him unconscious. The clinical history was incomplete, but it was said there was copious hemorrhage from the nose a few hours before death, which took place some days later. The autopsy showed a contusion near the occipital protuberance, a fracture of the bone extending on the right side into the foramen magnum, and on the left side a shorter distance. There was congestion of the surface of the brain.

Dr. VAN SANTVOORD had made a number of autopsies in cases of fracture of the skull, and had found that fracture without surface-hemorrhage on the brain seemed innoxious.

Dr. WYLIE said a student from the South had received an injury of the head, had hemorrhage from the ears and pharynx, and serous discharge from the ears for ten days afterwards. There were no other symptoms, and the man got well without special treatment.

The PRESIDENT said there was a skull in Wood's Museum which belonged to a seaman who fell a distance of twenty feet, striking on the buttock, and the only injury seen after death existed in the base of the skull, which had sustained twelve fractures from displacement of the spinal column upward.

ULCERATION OF THE VOCAL CORDS.

Dr. VAN SANTVOORD presented the larynx in which the vocal cords had become markedly ulcerated during the course of measles. The child suffered from a pharyngitis and broncho-pneumonia developing in the course of the exanthematous disease. While he had not made it a custom to examine the vocal cords in children dying during the course of measles unless there were symptoms pointing specially to disease of them, he had not supposed that ulceration of the cords was common. He was therefore surprised to learn, on studying the literature of the subject, that this complication was very frequent.

DIFFUSE FATTY DEGENERATION OF THE HEART, WITH CONCENTRIC HYPERTROPHY OF THE LEFT VENTRICLE AND MITRAL STENOSIS.

Dr. J. H. RIPLEY presented the specimen. The man was 67 years of age, and a year ago weighed two hundred pounds. He had scarcely had any sickness until July, 1884; had never had rheumatism nor syphilis. In August he had an attack of diarrhœa with pain. Dr. Ripley saw him about two weeks later, when the diarrhœa had ceased and he was suffering from pain in the region of the liver. The temperature was 101°. One symptom struck him forcibly,—namely, the abnormal heart-action. It beat about one hundred and sixty times per minute, was very feeble and irregular. The area of hepatic dulness extended four inches below the free border of the ribs. There was turgescence of the veins of the neck and œdema at the base of the lungs. Acute perihepatitis was diagnosticated. The acute symptoms subsided at the end of a week. The dropsy increased, fluid accumulated in the pleural and peritoneal cavities, and general anasarca developed. In November Dr. Ripley punctured the cellular tissue, and large quantities of fluid drained away. The pulse, however, continued rapid and feeble, and the patient suffered from dyspnœa and anorexia.

Dr. Ripley diagnosticated fatty degeneration of the heart. For some time no cardiac murmur could be discovered. Finally, however, one became perceptible at the apex, and still later one at the base of the heart. Dr. Ripley discontinued his visits about the 1st of January, although there still remained some dropsy. Later he grew worse, and an irregular practitioner attended him until death. It was understood that hypercatharsis was produced for general dropsy. The patient weighed but one hundred and forty pounds. The skin was all the time of a yellowish color.

At the autopsy, besides general dropsy and fluid in the serous cavities, the liver was found considerably enlarged, its capsule thickened, and had the appearance of the nutmeg-liver; the kidneys were covered with an unusual quantity of fat, the capsule adherent, the cortical portion thickened; the spleen the size of a pullet's egg; the lungs carnified at the base; there were old pleuritic adhesions; the pericardium contained much fat; the aortic valves were thickened and shrunken; the mitral valve was insufficient; the walls of the left ventricle much thickened and its cavity greatly diminished, constituting concentric hypertrophy. Microscopic examination showed marked fatty degeneration of the walls of all the cavities of the heart, particularly of the right ventricle. There was hardly any atheroma of the arteries.

Dr. Ripley said it was stated that in fatty degeneration of the heart the walls of the left ventricle were usually more implicated than those of the right. In the present case the right ventricle had undergone fatty change to greater extent than the left. While fatty degeneration of the heart was common, its

clinical history had not been much written up, and for that reason he thought this case interesting. The great rapidity of the pulse, sometimes two hundred per minute, its feebleness and irregularity, were striking features in the clinical history of the case.

Dr. VAN SANTVOORD and Dr. JACOBI thought it generally stated that fatty degeneration was usually more marked in the right than in the left side of the heart.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, JUNE 25, 1885.

The President, E. O. SHAKESPEARE, M.D., in the chair.

DR. WM. OSLER exhibited for Dr. McLAREN, of Paisley, Ontario, some specimens, which he had sent him, of hydatids passed with the urine, with the following history, dated April 13, 1885:

The patient, Geo. S., aged 58, an Englishman, resident of Ontario for thirty-five years, at present a farmer, but formerly a butcher for fifteen years. Always enjoyed good health until about four years ago, when he had a severe attack of nephritic colic on the right side, lasting only a short time and quickly relieved. Had no further trouble until two years afterwards, when a similar attack occurred, confining him to bed for several weeks; some days he was better, but always worse on exertion. After a period of improvement for several weeks, during which time he was able to attend to his farm duties, he felt pain and uneasiness over the right kidney, followed in a day or two by pain at the point of the penis, which continued for several hours and was relieved by the passage of gelatinous-looking masses in the urine. These bodies—hydatids—he has continued to pass at intervals of from two to four weeks. The discharge is always preceded by an uncomfortable feeling of fulness in the region of the kidney and pain or uneasy sensations at the penis. No tumor has at any time been discovered in the neighborhood of the kidney. With the exception of these attacks of pain and distress in the urinary organs prior to the discharge of the hydatids, he enjoys good health. He lost no weight; appetite good; bowels regular.

The specimens, which were given to me for examination by Dr. Palmer Howard, of Montreal, consisted of ten or a dozen hydatid cysts, ranging in size from a pea to a grape, and contained in a small quantity of urine. They were evidently the daughter-cysts of a larger one which was in communication with the urinary passages. Several of the cysts contained smaller ones (granddaughter-cysts). On examination of a drop of the urine in which they were, numerous hydatids and the characteristic hooklets could be seen.

Echinococcus of the kidney or urinary passages is very uncommon. Statistics show that the left organ is more frequently affected than the right. The points of interest in this case are: the long duration, the absence of evident tumor, and the excellent condition of the patient. Here is evidently a cyst of considerable size, possibly in the right kidney, and which bursts at times into the pelvis with the discharge of the hydatids.

In 1882 Dr. Osler had reviewed the literature of American cases of echinococcus disease, and had made inquiries of the curators of the principal museums, the result of which was the collection of sixty-one instances of the disease (*Am. Jour. Med. Sci.*, 1862). In not one of these was the cyst in the kidney. Since that date six other cases have been reported by Carson (*St. Louis Courier*, 1884), cyst of liver; Schæffer (liver), *Trans. Med. Soc. Penn.*, 1884; liver (liver and mesentery), *N. Y. Med. Journal*, 1885; Helen, *New Eng. Med. Journal*, 1883–4, cyst of liver, ruptured into intestine; Welsh, spleen, *Med. News*, 1884.

Dr. MORRIS LONGSTRETH exhibited a series of six specimens of echinococci situated in various organs. Owing, however, to the notes not having been forwarded to the Recorder, no details can be given.

Dr. J. H. MUSSER presented the following specimens: melanotic sarcoma, acute suppurative pancreatitis, thrombosis of portal vein, cirrhosis of the liver, and syphilitic (?) disease of the lung.

Dr. J. R. MITCHELL presented a specimen of carcinoma of the peritoneum, liver, and pancreas. The details will be published at a future time.

Dr. C. B. NANCREDE presented a specimen of suppurating hæmatocele, which he had that day removed by castration from the person of a patient 74 years of age. It presented some points of interest, which were dwelt upon by the exhibitor.

Dr. FORMAD presented a specimen of supposed typhoid lesions in a child 15 months old. There was no history, as it was a coroner's case.

REVIEWS AND BOOK NOTICES.

ANNUAL REPORT OF THE SECRETARY OF THE NAVY FOR THE YEAR 1884.

REPORT OF THE SURGEON-GENERAL OF THE NAVY FOR THE YEAR 1883.

The Report of the Surgeon-General of the Navy for 1883 is, like its predecessors, a valuable and interesting work. There is in the last report much to attract the attention of the medical profession, outside of the usual information furnished in these volumes. The importance of maintaining the few naval hospitals belonging to the government cannot

be overestimated, and the recommendations of the Surgeon-General deserve prompt approval. The establishment of the quarantine-station at Portsmouth, New Hampshire, and the practical recommendations relating thereto, are deserving of praise. The report concerning the Museum of Hygiene shows that institution to be in a prosperous condition. The collection, numbering six hundred and fifty articles, consists of articles, plans, etc., arranged under the divisions of "hygiene of civil life," "hygiene of private life," and "military and naval hygiene." The volumes in the library now number seven thousand and forty-nine. The experimental laboratory connected with the Museum has all requisite apparatus for work, both in organic and inorganic chemistry; also apparatus designed for special investigation, as Koch's for germ-culture, Hemple's gas apparatus, Winkler's gas apparatus, and that of J. Burdon-Sanderson for physiological experiments, together with the spectroscope, polariscope, photometer, and other special instruments. The enumerated articles, except that of Burdon-Sanderson, have been recently received.

"Connected with the laboratory is the division of microscopy, which is essentially complete in outfit. Photomicrographic work, as well as ordinary photography, can be done with complete apparatus."

All this goes to prove the high scientific standard of the Medical Corps of the United States Navy. The history of the statistical reports of the Bureau of Medicine and Surgery is given. Surgeon T. J. Turner prepared, in 1870, the first form of statistical reports, with accompanying sanitary notes, for Dr. William M. Wood, the first Surgeon-General of the Navy, and the admirable form then originated has been employed in subsequent reports.

The plan for post-graduate instruction for naval medical officers, and the necessity for strict attention to the ever-advancing science of medicine, must meet with the approval of the profession, and, it is to be hoped, will be favorably considered by the Secretary of the Navy, and carried out as suggested.

Valuable and instructive reports are contributed by Medical Inspector Bates, on the "Medical History of Japan," by Surgeon George W. Woods, on the "Chief Commercial Ports of India," and by Medical Director Browne, on the "Condition of the Famous Naval Medical School at Haslar, England." Passed Assistant-Surgeon Herndon furnishes a very interesting report of the United States Fish Commission steamer "Albatross." "The Cruise of the 'Juniata,'" by Surgeon George W. Woods, is another interesting paper, placing the profession twice in his debt in this one volume. The section relating to *Persia* is particularly instructive. Surgeon Wise contributes a "Sanitary Report concerning the School-Ship 'New Hampshire.'" W. T. P.

TRANSACTIONS OF THE MEDICAL SOCIETY OF WEST VIRGINIA, EIGHTEENTH ANNUAL SESSION. Held at Weston, May 20 and 21, 1885.

This volume of Transactions, which should have had an index, contains a masterly annual address by the President of the Society, George Baird, M.D., of Wheeling, in which the prospect of an epidemic invasion of Asiatic cholera, and the steps to be taken to reduce its virulence, the establishment of a Department of Health as one of the departments of the general government, its presiding officer to have the same privileges as other cabinet officers, the dangers of druggists prescribing for the sick, the importance of the work done by State Boards of Health and Vital Statistics, specialism, quackery in the profession, the anti-vaccination action of the Legislature, the resignation of Dr. Reeves, and other timely topics, are intelligently and ably treated.

The papers read were not numerous, but are interesting and valuable contributions. Dr. John L. Dickey, of Wheeling, read a brief but comprehensive communication on the "Errors of Refraction;" Dr. John Frissell contributed "A Few Thoughts on Blood-Letting and the Use of Forceps in Cases of Labor," approving the former and discouraging the use of the latter; Dr. F. Howell, of Clarksburg, recommended "Carbolized Catgut Ligature in Divided Tendons;" Dr. D. Porter Morgan, of Clarksburg, discussed "Operations in Malignant Diseases," urging early operation; Dr. I. A. Harris, of Parkersburg, in a paper entitled "Mens Sana in Corpore Sano," proposes hygienic measures to prevent nervous disorders, and advocates separate hospitals for the curable insane; Dr. C. C. Hersman, from his experience, discourages the use of "Paraldehyde as a Hypnotic;" Dr. T. R. Evans, of Nuttallsburg, reviews the "Signs of Impending Death;" the whole concluding with the report of a committee appointed to consider the remarkable utterances before the State Legislature of Mr. H. C. McWhorter on the subject of vaccination. These papers, which are unusually readable, are not accompanied by reports of discussions.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by WILLIAM PEPPER, M.D., LL.D., assisted by LOUIS STARR, M.D. Vol. II.—GENERAL DISEASES (Continued), AND DISEASES OF THE DIGESTIVE SYSTEM. Lea Bros. & Co., 1885. Pp. 1194, index pp. 118.

The second volume of this "System of Practical Medicine by American Authors" fully maintains the standard established by the first volume, which has been so favorably received by the profession both abroad and at home. The General Diseases considered are Rheumatism, Gout, Rachitis, Scurvy, Purpura, Diabetes Mellitus, Scrofula, and Hereditary Syphilis. The Diseases of the Di-

gestive System are systematically discussed under the titles of Diseases of the Mouth and Tongue, Tonsils, Pharynx, and Œsophagus; Functional and Inflammatory Diseases of the Stomach; Simple Ulcer and Cancer of the Stomach; Hemorrhage, Dilatation, and Minor Affections of the Stomach; Intestinal Indigestion, Constipation, Enteralgia, Acute and Chronic Intestinal Catarrh; Cholera Morbus; Intestinal Affections of Children in Hot Weather; Pseudo-Membranous Enteritis, Dysentery; Typhlitis, Perityphlitis, and Paratyphlitis; Intestinal Ulcer; Hemorrhage from the Bowels; Intestinal Obstruction; Cancer and Lardaceous Degeneration of the Intestine; Diseases of the Rectum and Anus; Intestinal Worms, Diseases of the Liver, Diseases of the Pancreas; Peritonitis, and Diseases of the Abdominal Glands (Tabes Mesenterica).

The contributors to this volume are twenty-two in number, and among them are recognized some of the principal authorities in this country upon the diseases they treat of. The principal articles are those by Dr. Roberts Bartholow, on "Diseases of the Liver;" Dr. Thomas G. Morton, assisted by H. M. Wetherill, on "Diseases of the Rectum and Anus;" Dr. J. Lewis Smith, on "Intestinal Affections of Children during Hot Weather;" Dr. R. Palmer Howard, on "Rheumatism;" and the series of articles by J. Solis Cohen, W. H. Welch, J. T. Whittaker, W. W. Johnston, and Hunter McGuire.

The publishers deserve to be congratulated upon the handsome appearance and substantial binding of this valuable work of reference.

HAY-FEVER AND ITS SUCCESSFUL TREATMENT BY SUPERFICIAL ORGANIC ALTERATION OF THE NASAL MUCOUS MEMBRANE. An Essay read before the Philadelphia Laryngological Society, April 24, 1885, by CHARLES E. SAJOUS, M.D. Illustrated with Thirteen Wood-Engravings. Philadelphia, F. A. Davis, Att'y, 1885. 12mo, cloth, pp. 103.

This essay merits the handsome dress in which it is presented. Several members of the American Laryngological Society—Drs. Daly, Roe, Shurly, McKenzie, Allen, Jarvis, and Sajous—had been for two years or more teaching the doctrine that hay-fever is essentially a neurosis dependent upon local conditions in the nasal passages, and various methods—cauterization by acids, by the actual cautery or galvanic loop, and removal of hypertrophies—have been practised successfully.

Dr. Sajous claims originality in his teaching as to the relation between local changes in the upper air-passages and hay-fever, and priority in demonstrating the actual practical value of superficial organic alteration of the nasal mucous membrane as a remedy for the disease. The results reported from the method described in the monograph fully establish its claim to its title.

A PRACTICAL TREATISE ON URINARY AND RENAL DISEASES, INCLUDING URINARY DEPOSITS. Illustrated by Numerous Cases and Engravings. By WILLIAM ROBERTS, M.D., F.R.S., assisted by ROBERT MAGUIRE, M.D. Lond. Fourth Edition. Philadelphia, Lea Bros. & Co. Cloth, 8vo, pp. 628.

The third edition of this well-known textbook on urinary disorders has been out of print for some years, during which time the work has undergone a thorough revision, and some of the articles have been rewritten. Much new matter has been introduced with regard to Bright's disease, and recent observations of micro-organisms included. The work is written particularly from a clinical stand-point, and its recommendations for treatment seem judicious and sound. A good bibliography is appended, besides the usual index and table of contents. It is well printed, and the illustrations are very good.

NOBLE DEEDS OF THE GREAT AND BRAVE, GATHERED FROM MANY AGES AND NATIONS. By R. S. HARTZELL. With an Introduction by Rev. HERBERT N. MORRIS, D.D. Attractively illustrated. Henry L. Warren & Co., Philadelphia, 1884. Published by subscription. Cloth, embossed, 8vo, pp. 512.

This handsomely-bound, clearly-printed, and finely-illustrated book contains, in its ten parts, illustrious and classical examples, culled from history and song, of grand achievements, heroic sacrifices, valiant exploits, knightly virtues, patriotism, devotion to duty, and other magnanimous traits, as recorded by distinguished writers and poets ancient and modern. The compilation has been carefully and creditably made, and, while admirably designed as a gift-book to a child, it will serve as a work of reference for older readers.

HEALTH-HINTS FOR TRAVELLERS. By JOHN C. SUNDBERG, M.D. D. G. Brinton. 12mo, pp. 61.

The author of these hints is a traveller of experience, who has been both in hot and cold climates and has picked up a number of useful hints, which his medical knowledge has enabled him to arrange in a systematic way for the benefit of others. His own observation coincides with the views of Parkes, and more recently Stanley, as to the danger arising from the use of alcohol in hot climates.

LECTURES ON PHTHISIS PULMONALIS. By ERNEST L. SHURLY, M.D., etc. 12mo, paper, pp. 115.

These valuable lectures, reprinted from the *Medical Age*, epitomize recent knowledge upon the subject, including the newest details of diagnosis and treatment.

GLEANINGS FROM EXCHANGES.

Radical Treatment of Hernia.—Mr. John Wood, Hunterian Professor of Surgery and Pathology, has delivered three lectures before the Royal College of Surgeons upon "Hernia and its Radical Cure." His views upon operative treatment are summarized in the following conclusions:

It appears indubitable, from the results of the last twenty or more years' experience of the radical cure of hernia, that the position of those surgical writers who have maintained that the radical cure should not be attempted except in the severest cases is untenable. The operation has given as great relief and exemption from the minor troubles and worry which make life miserable as any operation associated with prolapse, such as hemorrhoids, and is even more safe. It is certainly quite as much called for, on the score of relief from pain and inconvenience, as most other abdominal operations. Though it may not, like ovariotomy, remove the certainty of a speedy death, and may, like colotomy, be called an operation of convenience or expediency, it often relieves suffering as severe as that for which colotomy is performed, and is attended by far happier results.

The justification of the operation being admitted, it remains to consider what cases are most appropriate for it, and which of the many we have passed in review is most proper and applicable for the cases chosen. The rules I have observed in my own cases have been as follows. The subcutaneous plan has been adopted:

1. In all cases of children above five years old, in whom trusses are useless and unavailable because of neglect, violent coughing and crying, sore groins, rapid increase in the size of the hernia, and interference with micturition.

2. In cases of young adults or boys under fourteen, whose prospects in life as candidates for the naval, military, or engineering professions, or for colonizing, are seriously impaired by the hernial condition. Such persons may be far from surgical assistance when the exigencies of duty or occupation may produce strangulation, or the breakage of a truss may leave them defenceless; they are subject, also, to increased life-assurance rates, from which the operation, when successful, relieves them. It should be done in able-bodied workingmen generally, whose various laborious employments may place them continually in danger of strangulation, and whose strength and usefulness are impaired by the hernia. The extent of the necessity for a radical cure of hernia, and the patriotic and social motives which demand it, are clearly made manifest by the estimates of the number of recruits and conscripts rejected for this complaint. Malgaigne states that one in every thirteen Frenchmen is ruptured; Arnaud, one in every eight. During the civil war in the United States, 38,132 were rejected in two years. In this country it is said that one in every twenty males is ruptured. The bodily ailments and mental worry which this condition and its consequences entail upon this large number of human beings make up a very impressive total of suffering. And the mortality from it must be also considered. In 1879, according to the Registrar-General's reports, as given by Dr. Spanton, no fewer than 1119 deaths occurred from hernia, of which 23.5 per cent. had undergone operation for strangulation, etc. The average rate of mortality of the operation of kelotomy in eleven large hospitals is given by the same author as 41.8 per cent. The proportion of the mortality from hernia increases with age to a marked degree. The importance of a permanent cure effected during youth for so large and useful a class as this, when thus viewed, rises to the point of a national demand.

3. In reducible cases, where the sac is thick and indurated from truss-pressure, or where the omentum is continually slipping down under the truss, showing thereby that it is abnormally elongated, I open the sac, tie the vessels of the omentum separately, and remove it below the ligatures; tie up the neck of the sac flush with the peritoneum at the deep hernial opening, and apply wire or tendon ligature to the canal and rings. When, from any cause, a first operation fails in effecting a satisfactory cure also, I open the sac, inspect its interior to discover any special cause for the failure, tie and remove the sac, and lace up the canal and rings with especial care and security.

4. In all favorable cases of strangulated hernia, both inguinal and crural, the coverings and front wall of the canal being necessarily divided to search for the constricting tissues, I open the sac, examine the contents, remove adhesions and doubtful portions of omentum, then tie up the neck of the sac, cut it off short, and remove it altogether (except in congenital hernia), and secure the walls of the canal and rings, as in the subcutaneous method. Of course, a wrong diagnosis of the condition of the bowel or omentum, and of their fitness to be returned into the abdomen, or some other cause arising from the strangulation, may, in these cases, result in a fatal issue. But I believe strongly that, if drainage be free and skilfully arranged, no increase of risk ensues from the attempt to produce a radical cure. Quite lately I have done this in a case of *reductio en bloc* in a man who is now convalescent in the hospital.

5. Cases of irreducible hernia and large and unmanageable cases of reducible hernia in patients otherwise in a good state of general health, and not above the age of sixty, and in which truss-pressure entirely fails to

render the patient comfortable and free from danger, seem to me to justify and to require operation, if the patient wish for the benefits which he may reasonably expect from a carefully-conducted operation under strict antiseptic methods. In all cases he should have the chances fairly laid before him in a way that he can understand, and then have the option without bias or persuasion.

In these cases, as in the last class, the operation necessarily assumes more or less of the character of an open operation under spray. The sac is freely opened, and is tied and removed, but the suturing of the canal and rings is effected as in the subcutaneous method.—*British Medical Journal.*

Permanganate of Potassium and Alcohol for Snake-Bite.—B. Hall Smith, M.D., in the *Atlanta Medical and Surgical Journal* (August), reports a case of rattlesnake-bite successfully treated with potassium permanganate and whiskey. The patient, an adult farmer, was found suffering with the combined effects of snake-venom and tobacco, an infusion of which had been administered by his friends. The punctures made by the fangs of the snake were laid open and cauterized by pure carbolic acid. As the stomach could not retain medicine, whiskey was given hypodermically into the leg or arm. The patient was greatly prostrated, there was excessive cardiac weakness, dilatation of the pupil, and he had every appearance of impending dissolution. The permanganate was given hypodermically (gr. 2½ in water f℥ss) every twenty minutes, alternating with whiskey, and occasional doses of dilute spirits of ammonia administered in the same way. At the end of five hours' treatment the patient was thought to be dying, but several injections of whiskey and one of ether revived him, and at the end of two hours more he was considered out of danger. The treatment was successful in saving life, but it is difficult to decide just how much of the credit belongs to the permanganate and how much to the whiskey.

MISCELLANY.

An Illegal Contract.—In the Michigan Supreme Court recently occurred a curious case, where the validity of an agreement between a physician and his patient as against a railroad company was in question. The physician, it appeared, had agreed to accompany the patient, who was injured by the defendant's cars, and explain to the lawyers and physicians employed by the company the character and extent of the injuries, receiving as compensation an amount to be determined by the sum awarded as damages. This agreement the court held to be illegal and void, though not on the ground that the injured man got more than he ought to receive. This did not appear to be shown at all. The court decided the matter on entirely different grounds, which are fairly expressed by the following extracts from the opinion: "He [the physician] puts himself in a position where both parties are expected to rely on him and to act on what he says. When under such circumstances he makes the disclosure of his knowledge and opinions the subject of a contract, whereby his compensation is to depend on the amount obtained by his employer by reason of the disclosure, it is plain that he puts himself in a position where it is his interest to exaggerate. . . . And however honest a man's actual intentions may be, and however truthful he may be, there is a temptation to misrepresent, and a direct danger that the misrepresentation will operate injuriously to the parties dealt with."

Adulterated Food.—The Board of Health of New York City has been waging vigorous and very commendable warfare upon the manufacture and sale of adulterated articles, but occasionally it attempts methods which the courts do not altogether sanction. This appeared recently in the case of adulterated teas offered for sale, which were proved to be filthy and innutritious, the point at issue being whether they were sufficiently harmful to health to be the proper subject for an injunction forbidding their sale. This injunction was asked for, but denied, for the reason that the imminency of the danger was not so conclusively shown as to warrant the issuing of an injunction. The case was appealed to the Court of Appeals, and the decision was affirmed. The decision did not mean that the court was willing to favor the sale of adulterated articles, but that in the case at bar other legal remedies besides an injunction were at hand, and, in its opinion, a case was not made out for an injunction.

The Elevated Railroads in New York City have caused a new danger to eyesight, and both from the minute filings made by the working of the brakes and from the dropping of live coals and sparks the passers-by need to be greatly on their guard. There have been several cases in the courts where damages were demanded for serious injury to the eyes, and in them all the railroad companies have been obliged to pay handsomely. In one case a lady, walking on the sidewalk over which the railroad structure was built, was injured by a hot cinder striking her full in the eye and permanent injury was caused, so that the jury, on the trial, awarded two thousand dollars damages. In another case, a similar injury from a spark led a jury to give a large verdict; and in a third, where the injury was produced by a fine steel filing lodging in the eye, an equally large verdict was rendered.

THE CHOLERA IN EUROPE.—In Spain the epidemic is in progress, and shows no signs of abating; and it has again broken out in Marseilles.

NOTES AND QUERIES.

VIS MEDICATRIX NATURÆ WANTED.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

Although I may be regarded by many as an old fogy, and my views necessarily antiquated, yet I cannot help observing that in these days of microscopic discovery and gynæcological research—when every human being is subject to hidden dangers from the micrococcus, the bacillus, or the bacteria, and all the other unseen poisons of the air we breathe, the waters we drink, and the food by which we are nourished—it is not considered safe for us to attend to any of the wants or duties of nature without being provided with antiseptics and other appliances to protect our valuable lives from the inroads of unseen and unknown diseases, which may be lurking in some quiet corner of our bodies, to burst out, like a midnight assassin, and destroy us suddenly.

The Creator does not make men perfect, and babies, being born in an imperfect condition, must be handed over to the specialist to be finished off. Having astigmatism, they must have glasses to correct their vision, splints to straighten their legs and stiffen their spines, or circumcision performed to control the nervous system, with various remedies and appliances which are considered requisite to perfect the human biped.

A short time since it was discovered that the cervix uteri was too long, and must be cut off; now it is torn, or the perineum is lacerated, whenever a babe is born, and the gynæcologist must be called in, like a skilful tailor, to sew up the rent.

If we may believe in the number of operations performed by the gynæcologists, both old and young, we must suppose that the process of parturition is different from what it was fifty years ago, since it requires so much care and watchfulness by the medical attendant that woman should be able properly to obey the command of her Creator to increase and multiply and thus people the earth.

If my memory serves me aright, there was once an old doctor named Vis Medicatrix Naturæ, who was very successful in the cure of disease. I think he still lives and practises, —for I have not yet heard of his death,—and perhape he has something to do with these wonderful cures. How else can such things be, unless nature has changed? Or am I growing too old to understand these modern improvements of the healing art? Alas, it may be so!

WM. T. TAYLOR, M.D.

1324 NORTH FIFTEENTH STREET, August 3, 1885.

TREATMENT OF DIPHTHERIA.

MR. EDITOR,—Dnring the winter of 1881 I began to treat diphtheria with sulphite of soda. Up to that time I had been using quinine, iron, and chlorate of potash internally, with solution of nitrate of silver as a local application, and milk-punch and beef-tea to keep up the strength. Finding the above treatment very unsatisfactory, I began to use the following, with much happier results. If the patient is seen early, before much weakness is developed, I give a moderate dose of calomel, followed in *one hour* by solution of citrate of magnesia; at the same time I order sulphite of soda in ten-to twenty-grain doses every hour, dissolved in a tablespoonful of pure water (no syrup or glycerin). The remedy is to be kept up every hour until the membrane begins to disappear, which in my cases was in from twenty-four to forty-eight hours. As soon as the membrane begins fairly to disappear, I give the sulphite every third hour until my patient is out of bed, and then three times a day until the patient entirely recovers. As auxiliary to the sulphite, I let the patient gargle the throat with a solution containing tannic acid and chlorate of potash every two hours. I have found that one of the best things to apply to the outside of the throat is the fat of the cured ham, sliced thin and sewed on flannel. To keep up the strength I give pure milk (cold) *ad lib.*, with brandy mixed with hot water and sugar every two hours,—perfect quiet in bed, plenty of fresh air, and a warm room. Since adopting the above treatment I have lost but two cases of diphtheria out of a considerable number of cases treated in the last four years.

B. F. NICHOLLS, M.D.

719 SPRUCE STREET.

OBITUARY.

PROF. HENRI MILNE-EDWARDS, the eminent physiologist, died on the 28th of July, in Paris, at the age of eighty-five years. He was born at Bruges, October 23, 1800, of English parents, his father being also well known for his physiological investigations. Having graduated in medicine in 1823, Prof. Milne-Edwards, in a long and busy life, filled many important positions and made many contributions to the literature of medicine and zoology. His greatest work was his "Leçons sur la Physiologie et l'Anatomie comparée de l'Homme et des Animaux" (1857-1877), the publication of which was celebrated by some of his old pupils last year by a fête, when a medal was struck to commemorate the event, bearing the image of the celebrated professor and an inscription setting forth his distinguished services to science and education. At the time of his death he was Professor of Zoology, member of the Institute, and Dean of the Faculty of Sciences. He had been Commander of the Legion of Honor since 1861.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 2, 1885, *TO AUGUST* 15, 1885.

COLONEL JOHN CAMPBELL, SURGEON.—Granted leave of absence for one month.

FIRST-LIEUTENANT FRANCIS J. IVES, ASSISTANT-SURGEON (recently appointed).—Ordered for duty in Department of the Platte.
S. O. 184, A. G. O., August 13, 1885.

SURGEON J. M. BROWN, ASSISTANT-SURGEONS CLARENCE EWEN, A. W. TAYLOR.—Ordered to rejoin their proper stations in Department of the Platte.

ASSISTANT-SURGEONS G. L. EDIE AND C. S. BLACK.—Ordered to rejoin their proper stations in the Department of Texas.
G. O. No. 7, Division of the Missouri, August 1, 1885.

CAPTAIN THOMAS F. AZPELL, ASSISTANT-SURGEON.—Retired from active service, August 10, 1885. S. O. 181, A. G. O., August 10, 1885.

CAPTAIN J. L. POWELL, ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Leavenworth, Kansas. S. O. 110, Department of the Missouri, July 30, 1885.

FIRST-LIEUTENANT WM. D. DIETZ, ASSISTANT-SURGEON.—Ordered from Fort Selden to Fort Stanton, New Mexico. S. O. 111, Department of the Missouri, July 31, 1885.

FIRST-LIEUTENANT A. R. CHAPIN, ASSISTANT-SURGEON.—Granted one month's leave, to take effect when services can be spared by the commanding general of the Department of the Missouri, with permission to apply for one month's extension. S. O. 179, A. G. O., August 6, 1885.

FIRST-LIEUTENANT PHILIP G. WALES, ASSISTANT-SURGEON (Fort Cœur d'Alène, Idaho).—Ordered for temporary duty at Boisé Barracks, Idaho. S. O. 130, Department of Colorado, August 1, 1885.

WILLIAM P. KENDALL.—Appointed to be Assistant-Surgeon, U.S.A., with rank of First-Lieutenant, to date from August 12, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM AUGUST 8, 1885, *TO AUGUST* 15, 1885.

BEYER, H. G., PASSED ASSISTANT-SURGEON.—To attend meeting of the "American Association for the Advancement of Sciences," at Ann Arbor, Michigan, and at conclusion of meeting to resume duty at the Smithsonian Institute.

BOYD, JOHN C., PASSED ASSISTANT-SURGEON.—From Navy-Yard, Washington, D.C., to special duty at Bureau of Medicine and Surgery, Washington, Navy Department.

LIPPINCOTT, J. C., PASSED ASSISTANT-SURGEON.—To Navy-Yard, Washington, D.C., as relief of Passed Assistant-Surgeon Boyd.

OWENS, THOMAS, ASSISTANT-SURGEON.—From special duty at Bureau of Medicine and Surgery, Navy Department, and waiting orders.

SAYRE, J. S., ASSISTANT-SURGEON.—From U.S.R.S. "Independence" to Naval Hospital, Mare Island, California.

PHILADELPHIA, SEPTEMBER 5, 1885.

ORIGINAL LECTURES.

SOME OF THE CAUSES OF FAILURE IN OPERATIONS FOR THE CORRECTION OF SQUINT.

Read before the Kentucky State Medical Society, June 25, 1885,

BY DUDLEY S. REYNOLDS, M.D.,

Professor of General Pathology, Hygiene, and Diseases of the Eye and Ear in the Hospital College of Medicine, Louisville.

IN order that we may be in a position to advance in the study of the best means of relief for persistent squint, it is first necessary that we should clearly comprehend its nature, as well as the predisposing and exciting causes.

In 1862 Donders gave the first hint at the real causes of convergent and divergent squint. Before that time, however, central lesions of the nervous system, traumatism, and habit were regarded as the most common causes; while sudden fright, and the attempt to imitate a person already affected, were counted occasional causes.

Graefe was quick to apply the optical principle suggested by Donders. Others took up the subject, and in 1864, when Donders wrote his great work on the anomalies of accommodation and refraction for the New Sydenham Society of London, he presented to the world a clear and wellnigh complete analysis of all the varying forms of squint, demonstrating the causes, both predisposing and exciting, and showing wherein Dieffenbach's already universally adopted tenotomy had not been attended with that degree of success necessary to establish it as a universally justifiable surgical procedure. What Graefe regarded as lost physiological sensibility through psychical exclusion, Mooren had already correctly interpreted as deficient refraction. Strangely enough, however, Mooren did not establish the relations which abnormal refracting power sustains to the accommodative function.

Alfred Graefe, as early as 1858, reported cases wherein the conditions of accommodation were recognized as tending to cause a deviation of the right eye; yet, farther on in his paper, he makes the strange announcement that the squint, though coexistent and intimately connected with the deficient accommodative power, was completely independent of the existing state of the accommodation.

We may say that all cases of persistent squint are independent of the existing state of accommodation, because, the squint being already established, the eyes must continue the exercise of an amount of accommodative power sufficient to compensate for the error of refraction as far as possible.

To be more plain, the world now recognizes in all cases of squint, whether convergent, divergent, sursumvergent, or deorsumvergent, a certain relation to the acuity of vision, depending upon irreconcilable obstacles to the harmonious fixing of the two eyes upon a single object.

The focusing power and the accommodative power are not the same; yet they are intimately associated with each other, and any disturbance in their normal relations may create the predisposing cause of some form of squint. Active accommodation implies the power of harmonious convergence of the optical axes of the two eyes, and a normal power of fixation. The fixing power will depend mainly upon the state of the perception, while the converging power will depend upon the normal state of the recti muscles, and this state, in turn, of course is dependent upon normal nerve- and blood-supply, as well as constitutional vigor. Central nerve-lesions may, by disturbing motor branches, create spasm in the muscle, or *paresis;* the pressure of morbid growths may exercise a similar power; impairment of the power of perception in the retina, or of the power of transmission in the optic nerve, or of the sensorium, will prevent fixation of the eye upon an object, and thus tend to produce squint. Opacities of the cornea, occlusion of the pupil, or displacements of the pupil, opacities of the lens or its capsule, diseases of the vitreous humor, all tend to predispose the eye to squint.

It is easily understood, therefore, why in many cases tenotomy cannot be relied upon as a remedy for squint. I have long been impressed with the difficulties attending this means of correcting squint, and I am persuaded that the first step in all cases should be directed toward the correction of errors of refraction,—first to

the acuity of vision, and subsequently to the inharmonious muscular action.

If the subject of squint have hypermetropia, which means insufficient power of refraction in the eyes, it will be observed at first that the subject, on looking at near objects, approaches too closely, and develops a squint by overtaxing the converging power of the eyes, and the squinting at first will be observed to come on with general cerebral excitement, followed in most cases by severe headache and general neurotic phenomena. If the subject have no organic defect other than the insufficient power of refraction, the squint may be corrected by suspending the patient's accommodative power and correcting the error of refraction. If organic change of structure has already occurred in the recti muscles, this must be corrected by tenotomy carefully done, the error of refraction being at the same time overcome by the use of suitable glasses. I have many times observed in young persons a perfectly satisfactory tenotomy accompanied by the use of lenses to correct the error of refraction mislead the patient, who, for a time having regained a vigorous accommodative power, laid the glasses aside, and gradually the eye having the least acuity of perception deviated outward.

Dr. Hermann Scheffler and Dr. Giraud-Teulon have demonstrated clearly the importance of muscular co-ordination of the eyes which have not nearly or exactly equal perceptive power. Since the acuity of perception always depends upon normal refraction, we must understand that eyes naturally endowed with normal perception may, in those who have congenital errors of refraction, never both be called into activity at the same time, and, by habitual use of one eye, the perception of the unused eye gradually fades as the child grows, and after mature growth of the individual this can never be regained. It is, therefore, obviously important to correct squint as soon as possible after it has become manifest.

The tendency to squinting is often observed for weeks and sometimes months before the deformity is established. During this period little or no excuse may, in the present state of our knowledge, be allowed for neglecting to determine the refraction of the eyes. The aversion to spectacles cannot weigh against the dangers to physical comfort of a person deprived of the use of one eye, with the horrible countenance which squinting produces.

Many a child, the subject of some trivial error of refraction, has been denied the opportunity of educational qualifications for a brilliant and useful career in life because ignorant parents and equally ignorant family-physicians have said, "This child, whose nervous system is abnormally excited, and who suffers headaches, and who at times exhibits vertigo with nausea after prolonged attempts at study, must not be permitted to continue his studies: the brain is over-sensitive, the blood-vessels supplying the outer structures of the eye are flushed; there is danger of brain-disease. Further attendance at school must not be permitted."

This state permitted to go uncorrected, however, will, when the child grows older, if the mind be active, lead in many cases to spasm at first, and subsequently to structural changes in one or more recti muscles; and this is squint.

Now, five minutes' attention to the state of refraction in the eyes will disclose the cause of all these disturbances. Suspend the accommodative power, and a test of refraction not only determines the necessity for the glasses, but at the same time reveals the character of glasses necessary.

With the involuntary accommodation of the emmetropic eye no cerebral excitement beyond that which accompanies the idea suggested by what the eye sees will occur. In all cases of defective refraction there must be added to the normal accommodative power a certain tension of mind in the attempt to see with sufficient clearness to trace the object in view. This antagonizes the power of thought, retards the consentaneous exercise of the faculties of reason, and one eye is sacrificed in the attempt to see where great strain is required to maintain fixation of the eyes upon the object. On the other hand, persons who have but one eye gradually become educated into the habit of dispensing with that power of the mind which discriminates angles, distances, and comparative size of objects. It robs the mind of its best faculty in all logical processes of thought. Children educated in the use of one eye must have remarkable intellectual endowments to enable them to acquire any profound degree of original reasoning power.

Claudius Ptolemy's first book on astronomy was devoted to an explanation of the causes and uses of single vision with two eyes. In all accurate visual exercise there must be constantly present before the mind a single point in the projected field, and this necessarily depends on the position of the eyes and the direction of the visual line. In eyes having defective refracting power, the projected point of the field of vision must correspond to identical points in the retinæ of the two eyes. If the image is not formed in identical portions of the retinæ, the two eyes cannot see singly, and it is a strain upon the mind, as well as the eye, to overcome the confusion which this condition produces. Whatever may be said concerning the influence of constitutional diseases or of traumatism in the development of squint, this mental strain necessary under the attempted exclusion of inharmonious images so irritates the sensorium as at times to disturb and limit the powers of thought. All errors of refraction do not lead to squint, however, nor even to the formation of images in abnormal portions of the retinæ; but they do lead to the necessity for abnormal intensity of mental processes, and bring on headaches with the accompanying depression of spirits, disturb sleep, impair the appetite, producing malnutrition, which, when fully established, constitute the sum of that group of neurotic phenomena now described as neurasthenia. With this foundation drawn from actual observation, do you wonder that merely surgical procedures often fail to produce permanent correction of the squinting eye?

In the haste to dispatch the business in hand, to say nothing of the obliging disposition one feels towards the other patients who are waiting in the reception-room, is it surprising that one should at times neglect some important detail in the preliminary examination of the eyes of the patient who has come for the radical cure of squint? A little introspection may be as useful for the doctor as it is wholesome to the Christian. The study of the causes of failure may lead to their elimination, and thus broaden our sphere of usefulness. I find it convenient to make frequent reference to the little case-books in which I have carefully kept the record of all cases of errors of refraction which I have attempted to correct. This often serves to point the way in searching for the cause of failure.

Soelberg Wells expressed a glowing truth in the statement that the first effects of an operation for the correction of squint are seldom permanent. A little inquiry as to the reason for this robs ocular tenotomy of all its simplicity and consigns it to a place high in the list of the more grave and serious operations in surgery. True, any mere tyro may cut a tendon, and cut it well; but it takes an ophthalmic surgeon well trained in the study of the anomalies of refraction and accommodation to estimate the character of a tenotomy which shall permanently establish the necessary conditions for the exercise of binocular vision. I am persuaded that tenotomy unaccompanied by correction of existing errors of refraction should never be done in persons under thirty years of age, and then only in such as have lost the sight in one eye. To correct the squinting of a blind eye is, in fact, a very simple proceeding; but where it concerns the establishment of an harmonious exercise of the visual power of both eyes it is a serious business, and should always be done with deliberation. The mechanical devices are not numerous, nor difficult to apply, provided always the optical properties of the eye are first inquired into.

To recapitulate briefly: Failures in attempts to correct squinting are to be attributed to neglect on the part of the surgeon to rectify at the same time deficiencies in the refractive and accommodative powers of the eye; neglect of the patient to observe the rules laid down for this purpose; and, more rarely perhaps, to bungling and unskilful execution of the tenotomy. It is a great mistake to suppose the eye operated upon for the correction of squint should be excluded from the light or bound up as one would bind a breach of continuity in the skin, and it is a mistake of greater import still to permit such exercise of the visual power as attempting to see near objects.

With the newly-discovered anæsthetic, cocaine, general anæsthesia is no longer to be thought of in operating on strabismus. The operation being done with as small an opening in the conjunctiva as will conveniently admit the points of the scissors, the eyes should at once be bathed in cold water, which always proves grateful to the sensibilities of the patient, and

the glasses, which have been previously devised for the correction of the error of refraction in each eye separately, should then be put on, to be removed at such intervals as may be desirable for bathing the eyes to soothe the irritation from the wounds. The accommodative power should be kept suspended by the use of a mild mydriatic just sufficient for that purpose until complete recovery from the operation.

It will be found that few persons indeed are able to make regular and continuous use of the eyes within a month after such an operation: it should in all cases be allowed, not only for the firm attachment of the cut tendon to its new position upon the surface of the eyeball, but for the complete absorption of the provisional callus or plastic effusion which nature provides for the cementing of the cut tendon to the scleral surface. If the eyes be used too early, permanent impairment of muscular function may be developed thereby, and the result of an otherwise perfect operation materially altered. All eyes that tend to squint should be treated upon the first discovery of the defect. In this way many may be corrected without operation. After the squint is confirmed, operative procedures should not be delayed, because the unused eye of a child always loses acuity of perception from the lack of use or natural exercise of the vision. Slight impairment of the perceptive function may, if treated before the mature growth of the individual, be in a great measure corrected; but the dimness of sight due to lack of use in an eye that squints can, in an adult, rarely be improved and never wholly overcome. It is hardly necessary to say that the tendons should always be divided close upon the surface of the sclerotica. The scissors with which this may be done should have thin and narrow blades, the points being so smoothly rounded as to prevent pricking or wounding of any of the structures with which they may incidentally be brought into contact. The hook used for lifting the muscle should be small and of delicate pattern. It should be angular, rather than curved. Finally, the patient should be cautioned not to exercise the muscles of the eyes for the amusement of inquisitive people, nor to encourage comments about the apparent results of an operation, before complete recovery is established.

ORIGINAL COMMUNICATIONS.

REPORT ON RECENT PROGRESS IN THERAPEUTICS.

BY FRANK WOODBURY, M.D.,

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COCAINE.

GAEDEKE, in 1855, isolated an alkaloid from the leaves of erythroxylon coca, which he named *erythroxylina*. Niemann, a pupil of Wöhler, further studied this substance in 1859, and gave it the name of *cocaina*. Prof. Schroff subsequently found that this alkaloid possessed to an unusual degree a benumbing effect when applied to the tongue, the spot remaining for a time anæsthetic, and he reported this fact to the Vienna Medical Society in 1862. From the communication made to the same Society last year by Dr. Karl Koller, Assistant Physician to the General Hospital in Vienna, the applicability of this new agent, especially to ophthalmic surgery, in many operations in which a local is preferable to a general anæsthetic, was announced, and supported by reports of experiments upon human beings as well as upon the lower animals. Previous to Koller's paper it had been known that this drug contracted the peripheral arteries, and that it dilated the pupil both through the circulation and by its local action. In a paper by Dr. Van Anrep,* published in 1880, a number of physiological experiments are reported, and the suggestion was made at the conclusion that its local anæsthetic action might become of importance. Koller, in his original paper, also acknowledges in complimentary terms the compilation of Dr. Sigmund Freud, read before the Vienna Society a few months previously.

After the publication of Koller's paper general interest was attracted towards this new agent, and it was put to manifold uses, to some of which it was manifestly unsuited. The author of the paper just referred to was content with recommending cocaine muriate therapeutically in two directions: (1) as a narcotic in painful affections of the eye, and (2) as an anæsthetic in operations on the eye. The internal administration of the drug was

* Pfluger's Archiv f. d. ges. Physiol., Bd. 21. Quoted by Knapp, monograph on "Cocaine."

referred to, but dismissed with the statement that it had been abandoned. In fact, internally it appears to possess no advantage over other agents, or, in truth, a good preparation of coca leaves, excepting perhaps certain cases of neuralgic or gouty pain in the stomach.

An application mentioned by Koller, but not original with him, was the remarkable control which it had been shown to have over the sensibility of the mucous membrane of the mouth, pharynx, and larynx. This effect is more decided, as a rule, than the insensibility produced by the bromides, and it has in consequence also found a wide field of usefulness in laryngoscopy and in operations upon the pharynx and larynx.

Dr. H. M. Biggs, of New York, published in the *Journal of the American Medical Association* a valuable article upon the physiological action of cocaine, which is founded on a series of experiments conducted by the author in the physiological laboratory at Berlin. Twenty-one experiments are minutely described, and carefully prepared tables are added. The writer summarizes the results of his experiments thus: "In conclusion, then, the action of cocaine on the frog may be summed up as follows: 1. It has a powerful local anæsthetic action on the skin, the mucous membrane, and the eye. It usually produces mydriasis. 2. It has a depressant action on the heart, reduces the force and frequency of its pulsations, and finally paralyzes it (first the ventricles and then the auricles) in diastole. 3. In small doses it at first slightly increases the number of the respirations, then decreases it, and in large doses diminishes it rapidly from the first, finally causing death from a paralysis of respiration. 4. It at first slightly heightens and then gradually depresses the reflex action of the spinal cord in small doses; large doses depress from the first. 5. Small doses at first slightly increase the irritability of the sensory nerves, then depress their irritability, and large doses depress from the first. 6. Both large and small (not very small) doses have a depressant action on the motor nerves. 7. It paralyzes the pneumogastric nerves. 8. Doses of moderate size diminish the excitability of the striated muscles. 9. The local application of cocaine to any of the more highly constituted organs or tissues causes a temporary cessation of their functional activity. 10. From the local and constitutional action on the different organs and tissues, it is rendered probable that its general action is a local one, exercised on all parts for which it has a chemical affinity, through its presence in the blood. The results of these experiments would seem to indicate the use of cocaine in tetanus and strychnine-poisoning." These conclusions agree in substance with the results of clinical studies upon the action of the drug, made by Prof. J. M. Da Costa, and reported to the College of Physicians of Philadelphia.

The literature of cocaine has become already quite extensive, and Dr. Knapp has rendered a service to the profession in collating into a monograph a number of papers upon the subject, including many interesting investigations and observations made by himself.

In addition to the various uses to which cocaine has been found applicable in eye-practice and in operations upon the throat, it has been used with advantage in painful affections of the ear, and as an anæsthetic for operations upon the auricle, canal, or tympanic membrane, as well as in catheterization of the Eustachian tube. In tinnitus aurium Knapp did not obtain any useful result from its application. In neuralgia and inflammatory earache the instillation of a few drops of a four-per-cent. solution gave immediate and complete relief. In toothache its curative effects are prompt and decided when directly introduced into the cavity. In facial neuralgia a solution of the alkaloid cocaine (twenty per cent.) in oleic acid has been applied with remarkably good effects. Its hypodermic employment over the supra-orbital nerve (four-per-cent. watery solution of cocaine muriate) has also given relief.

For the removal of small growths, where a local anæsthetic is needed, a hypodermic injection near the site of the tumor will enable the surgeon to remove it without pain. This may also be utilized in removing needles from the hands; also in minor operations, such as that for ingrown nail, and where it is desired to apply a caustic agent.

In the surgery of the nasal passages cocaine has been of great service in enabling the surgeon to remove hypertrophies, apply the galvano-cautery, etc., without discomfort. The insufflation of five-per-cent.

solution has also given great relief in certain cases of hyperæsthesia of the nasal mucous membrane accompanying hay-fever or coryza.

In extensive tubercular ulceration of the larynx, with dysphagia and odynphagia, the application of a strong (ten to twenty per cent.) solution will often enable a patient to eat a meal in comparative comfort.

The value of cocaine in laryngeal surgery is unsettled. Some cases have been reported in which the use of strong solutions facilitated the removal of growths, while in others it completely failed. Bosworth has used the agent in the form of a spray for spasmodic cough attending bronchitis with satisfactory results. He used a Delano hand-atomizer with a two-per-cent. solution.

In general surgery the use of cocaine finds but limited employment, on account of the few operations in which local anæsthesia is required. In the case of the distinguished patient in New York, suffering with pharyngeal cancer, whose sickness and recent death moved the world to sympathy, it demonstrated its usefulness in relieving pain of malignant disease. In operations involving nerve-trunks, or on mucous membranes such as the interior of the mouth or the rectum, cocaine has found a place, as well as in operations upon the genital organs (cutting strictures in the pendulous portion, overcoming spasm, the introduction of instruments into very sensitive urethræ, cauterizing venereal sores, etc.).

With regard to the dangers of cocaine, it may be almost said, as of the snakes in Ireland, "there are none." It causes mydriasis, but never to the maximum, and the effect passes off again in a few minutes. Slight dizziness or nausea has been also mentioned, but it may be easily relieved by inhaling nitrite of amyl or by a hypodermic injection of morphine. In some operations upon the eye there appeared to be more bleeding after its use than usual, and some unfavorable results have been reported by Dr. P. D. Keyser after operations for cataract: possibly such accidents may be attributable to some impurity of the drug or to the presence of bacteria in the solution used.

The fact that cocaine has been reduced in price, so that it can be purchased at retail at from ten to twenty cents a grain, warrants its more frequent use than when it was only a therapeutical curiosity at several thousand dollars per pound.

ABSINTHINE.

An ancient remedy of some repute, wormwood has almost entirely dropped out of modern therapeutics, although still used sometimes in domestic practice in infusion as a tonic, emmenagogue, or anthelmintic.

Of late years, attention has been frequently directed to the peculiar phenomena produced by the abuse of absinthe in the human organism, and its toxic effects are now generally admitted. It is true that these fatal results have been attributed to the large quantity of alcohol consumed, rather than to the presence of absinthe; but it has also been shown that the phenomena are essentially distinct from those produced by an abuse of the other forms of alcoholic liquors.

The question, however, appears definitely settled by the labors of Dujardin-Beaumetz. It is now generally acknowledged that the essence of absinthe is a dangerous agent, and that the volatile oil or essence of absinthe distinguishes itself from other active principles by the property of producing an intoxication characterized by epileptiform seizures. One of the active principles is therefore toxic; the other, the bitter principle, it is claimed has no toxic properties, and, on the contrary, may in certain cases be a remedy of very great utility. Dr. Roux, in a systematic paper on this subject (*Bulletin Générale de Thérapeutique*, tome cvii., 1884, p. 438), reports a number of clinical cases in which the agent was used, and concludes that this bitter principle should be utilized. He found that,—

1. The absinthine obtained by the process of Duquesnel—the bitter principle of absinthe—is not toxic.

2. Absinthine is a medicament useful in chloro-anæmia, and in convalescence from grave diseases which have altered the digestive power without lesion of the digestive tube.

3. Absinthine is especially useful where, with anorexia, there exists constipation more or less obstinate.

4. The most suitable dose is ten centigrammes, ten minutes after a meal, twice daily; or it might be given in pills before each meal.

ANTIPYRINE AND KAIRINE.

Although the composition of antipyrine is kept secret for commercial purposes, and has been for evident reasons prevented from coming into general use, the clinical experiments that have been made with it have established for it a reputation as an antipyretic which justifies its title. It was first prepared by Dr. Knorr, of Erlangen, and introduced by Dr. Filehne as a febrifuge. Especially in the hyperpyrexia of typhoid does this agent act with promptness and efficiency; in erysipelas and rheumatism it is less certain in its results. In doses of ten or fifteen grains every hour until five or six have been taken, or in single doses of from fifteen to thirty grains, it usually quickly reduces the fever-temperature, with its rapid pulse and respiration. It does not act ordinarily by producing diaphoresis; although this result has been noticed, in many cases it is absent. The only objection appears to be that it is rejected by the stomach in some patients, and in others, although the perspiration may not be profuse, yet there is considerable depression of the bodily powers.

Kairine, an agent which in its composition is probably closely related to antipyrine, has been introduced by Dr. Filehne, and is used by him in cases similar to those in which antipyrine is used, as a substitute for it, in ten-grain doses, repeated if necessary as in the other cases.

Antipyrine and kairine have been used in combination by Dr. G. Mangazzini, who reports that the temperature was reduced more quickly than by either alone. Where high temperature is maintained by some condition of the bowel which is attended by irritation, the bowels might be cleansed, and paregoric administered in first typhoid elevations of temperature, preparatory to the administration of the antipyrine.

[At the German Hospital antipyrine has been used, and the results claimed for it fully confirmed. Single doses of fifteen to twenty grains were usually well borne by the patient, and the effect upon the temperature-record was very obvious. Some cases, which were unable to take the remedy because it was at once rejected from the stomach, afterwards obtained good results from its administration by the rectum as a suppository containing thirty grains. The rectal administration of antipyretic agents is a method which has been too much neglected. If remedies can be given by the bowel, and the stomach reserved for its digestive functions, it offers a distinct advantage in many cases. It was found that antipyrine was most useful in breaking up a habit of high temperature in the third week of typhoid, and in relapses. No eruption or other bad results from its use were observed, except that in a few cases it simply could not be retained in the stomach.]

ADMINISTRATION OF ALCOHOLIC AND OTHER STIMULANTS.

In another column is a paper calling attention to a very important subject, involving a question of responsibility on the part of the profession for the prevalent abuse of alcohol by the laity. The arguments advanced in favor of administering dilute alcohol instead of whiskey or brandy are forcible and convincing. The desirability of prescribing pure, unadulterated drugs wherever possible, the well-known variation in strength of commercial spirituous liquors, and the comparative cheapness and convenience of substituting for them a stimulant containing a known proportion of pure ethylic alcohol, are discussed in the paper read before the College of Physicians by Dr. Leffmann. There are many arguments in favor of and no valid ones against this method of the medical employment of alcohol, the availability and efficiency of which have been proved by several hospitals and public institutions which have adopted it. At the German Hospital, during the term of the reporter this summer, cases of pneumonia, phthisis, and typhoid fever took alcohol (diluted one-half with mint-water and a little glycerin)—in short, wherever an alcoholic stimulant was needed—without objection and with satisfactory result.

The method deserves to be generally adopted in hospitals where accuracy of dosage and efficiency are desired, which in this instance are also favored by cheapness. There is no need, under such circumstances, of allowing the patient to be aware that he is taking alcohol or an alcoholic stimulant and thus be provided with an excuse for future indulgences.

A recent writer in the *Therapeutic Gazette*, Dr. J. B. Burroughs, of New York, recommends the substitution of nitro-glycerin for alcohol in some cases requiring prompt stimulation, and reports a case of poisoning by laudanum in which hypodermic injections of atropine were supple-

mented with the inhalation of glonoine with remarkably good effect. He says that hardly a day passes in which he does not use it in cases where brandy might be given. He claims—1, that one or two drops of a one-per-cent. solution are equal to an ounce or more of brandy; 2, it is tasteless, colorless, and nearly odorless; 3, its effects are rapid; and, 4, its greatest advantage is that there is no danger of creating an appetite for stimulants.

It should be remembered that alcohol is often administered in cases where it is unsuitable, as in sunstroke, where another form of diffusible stimulant, such as ammonia or tincture of capsicum, would be far better. In some cases of stupor (alcoholic, hysterical, etc.) the use of an enema containing a drachm of tincture of capsicum with a small quantity of water has been followed by prompt, even brilliant, results.

A CASE OF ENDOMETRITIS EXFOLIATIVA.

BY W. THORNTON PARKER, M.D.

AS membranous dysmenorrhœa is by no means common, the following case may prove interesting: it will at least remind us of the conflicting statements of our teachers concerning the pathology of this disease.

Mary H., a married woman, with two children living, the youngest three years old, has had a history of dysmenorrhœa, and has repeatedly passed shreds, and once before a cast of the womb. Sickness commenced with pains in and about the hips and abdomen, increasing severely with the menstrual discharge. They became at last so severe that she "suffered as if in labor." Hot cloths and various home remedies were applied until something came away, and, hemorrhage continuing, I was sent for.

I found my patient still in pain and flowing quite freely, and, upon making examination of the contents of the uterus expelled, I found it to be a complete triangular cast or sac of the uterus. The patient received opiates at once, sufficient to control the pain, and a moderate amount of ergot was administered during the succeeding twenty-four hours. The vagina was plugged for a short time with absorbent cotton wet with a weak solution of tincture of iron; but this was soon removed, the hemorrhage steadily subsiding. The cervix was neither plugged nor dilated, the specimen being sufficient evidence that the organ was empty. The patient continued to improve under generous diet, malt, and dialyzed iron.

The case was afterwards diagnosticated as chronic corporeal endometritis, complicated for years with exfoliative dysmenorrhœa. A chronic leucorrhœa yielded slowly to treatment with hot vaginal injections and Mitchell's suppositories containing sulpho-carbolate of zinc. No shreds or casts were passed within a year after this sickness, but a general improvement in health went on without interruption.

The specimen fully proved itself to be a "dysmenorrhœal membrane" or exfoliation from endometritis. There *had been no sexual intercourse* since the last menstruation, and, indeed, for some time previous to that date. The patient had no reason to consider herself pregnant, and a similar cast had been passed before marriage. No suspicion of sexual intercourse previous to marriage could be reasonably entertained.

The case, then, may be either one of membranous dysmenorrhœa or of an exfoliation the result of endometritis. Which is it? In view of the fact that so much difference of opinion exists on this subject among authorities, it may be worth while to quote from some recent writings. I have been particularly impressed by a paper of Dr. Beigel's, which seems to agree with the history of the case under consideration.

The case interested me especially at the time, because some of my older professional brethren, without examining the specimen, considered me to be laboring under a mistake and discovering in the simple products of an abortion a case (to them very rare) of membranous dysmenorrhœa. The fact that the woman was married and had children living made my claim, to them, an absurdity, and I was conscious of having lost considerable of their respect by error in diagnosis and my persistency in adhering to my opinions. One went so far as to warn me that should I, after all, at some future time run across a true "dysmenorrhœal membrane" in an unmarried woman, I need not be willing to risk too much on the reputation of my patient for chastity. Finally, to complete my disappointment, the specimen itself was lost on the way to Prof. Thomas.

Dr. Beigel concludes from the result of his examination as follows:

"1. That the so-called dysmenorrhœa membrane occurs in consequence of primary or secondary disease of the uterine mucous membrane,—*endometritis*.

"2. The characteristics of this disease consist in a pathological change of the mucous membrane, whereby, in consequence of well-marked proliferation from beneath, the membrane is shed in large shreds or as a continuous sac.

"3. The expulsion of this, as a rule, occurs through contractions of the uterus after preceding hemorrhage, menstrual or otherwise, whereby closure of the os internum by the membrane leads to retention of blood and the production of intense pain.

"4. As menstruation plays a secondary part in the development of this affection, and the formation of the membrane is in no way connected with conception or abortion, it seems better to give up the terms 'dysmenorrhœa membranacea' and menstrual decidua, and adopt the denomination 'endometritis exfoliativa.'

"5. The microscopic examination of the membrane does not furnish similar results. In one class of cases we find the normal elements of the mucous membrane merely pathologically increased; in another series the individual elements of this, as the glands or epithelium, are lost or in a state of degeneration; in a third class embryonal cellular tissue is formed; and in a fourth epithelium plates or cells, which are very similar to these, alone or in conjunction with the embryonal tissue of the skin-elements of the membrane.

"6. In all cases it forms a marked cellular production, constituted of free cells, which form the definite occasion of the loosening of the mucous membrane from its attachment.

"7. The pathological changes of the uterine mucous membrane in *endometritis exfoliativa* appear to be such that the development of an impregnated ovum in the uterine cavity cannot take place: therefore the patients, as long as they are under the influence of the disease, are sterile."*

Membranous dysmenorrhœa, as it is called, is considered by Hausmann and others to be an "imperfect conception;" but these writers admit that it is always connected with some *morbid process.* Barnes believes that this affection is uncommon in single women,—*i.e.*, virgins,—and hence arrives at the opinion that it must be associated with either sexual intercourse or an imperfect conception. Hausmann also claims that this process is never associated with *maidens*, and that it is *always* the result of sexual intercourse.

At a meeting of the Obstetrical Society of New York, March 17, 1874, Prof. Thomas presented a specimen of a complete dysmenorrhœal membrane. He reported that every third month the patient passed a similar membrane, and shreds every month. The patient was a married woman, but had never been pregnant.

At a meeting of the Obstetrical Society of London, Prof. Barnes reported the case of a lady medical student, who brought to him a specimen of dysmenorrhœal membrane she had passed herself. She denied ever having had sexual intercourse.

I believe three cases were reported in the *American Journal of Obstetrics*, but the dates have been lost, and I copy the notes as I made them in my *index rerum* six or seven years ago.

The following quotations from Tanner and Leishman may be instructive in this study:

"When we examine with a quarter-inch object-glass the normal catamenial fluid, it will generally be seen to contain a considerable quantity of epithelial débris, showing thereby that the healthy mucous membrane lining the uterus has a periodical tendency to shed its superficial cells. The uterine mucous membrane becomes congested and swollen, I believe, in most women, at each monthly period. But in some forms of dysmenorrhœa it gets more hypertrophied, and then, being exfoliated, is expelled, with *distressing bearing-down* pains, in the menstrual discharge. This dysmenorrhœal membrane is generally passed in fragments; but every now and then it comes away whole, forming a complete triangular-shaped cast of the entire uterine cavity. It is rough externally, having a cribriform appearance produced by the pores of the utricular follicles or glands; while internally it is smooth and moist. The menstrual decidua is similar in structure with the true decidual covering of the ovum; but it may generally be distinguished from it by the circumstance that it is more flimsy and unsubstantial in character; that it is chiefly made up of layers of flattened or cylindrical epithelium; and that its gland-ducts are very much smaller." †

* Archiv für Gynaekol., Band iv. Heft i.

† Tanner, p. 260, English edition.

"It must be made clear, however, from the outset, that all solid matters discharged from the uterus are not 'moles,' properly so called. In other words, all such discharges are not the result of impregnation,—a fact which is of obvious medico-legal importance, and which imposes upon us the necessity of drawing a careful distinction between 'true and false moles . .''

"It is, moreover, much less substantial in its texture and more easily torn than the decidua, which has, under such circumstances, according to Montgomery, 'a soft, rich, pulpy appearance, deep vascular color, and numerous well-developed utricular follicles or crypts and foramina for the reception of the nutrient vessels from the uterus which are always so distinctly observable.

"In one point, however, the dysmenorrhœal membrane resembles the decidua: having its inner surface smooth and the outer unequal; but it is of a ragged, shreddy appearance, unlike that of the healthy uterine decidua, and is, moreover, entirely destitute of the little cotyledonous sacculi described as an essential character in the latter structure." *

"We cannot, without imminent risk of falling into scientific error and unjust suspicions of the chastity of the patient, admit that any structural character of a membrane cast from the uterus short of the detection in it of *chorion villi* is proof of impregnation." †

Prof. Thomas considers that the pathology of membranous dysmenorrhœa is "not yet known," and, without giving us the benefit of a direct assertion, considers Dr. Oldham's opinion the most rational, —*i.e.*, "that, at some time during the inter-menstrual period, the entire lining membrane of the uterus is lifted from its base and separated, so as to be ready for extrusion at one of the next menstrual crises." ‡

Prof. Thomas states that he "cannot attribute it to endometritis, for evidence of the existence of that disease was entirely wanting in *four cases out of five*." It would seem that in one case, then, *positive* endometritis *was* present.

To illustrate the confusion and uncertainty which exist on the subject, the conflicting reports of Rokitansky and Wedl, reported by Dr. Mandl, of Vienna, in the *Obstetric Journal*, vol. ii. p. 402, and quoted by Prof. Thomas, may be cited as a remarkable example. Sufficient evidence exists, however, to justify us in refusing to claim that the membrane can *only* be associated with impregnation, and it is evident that many cases have been reported where this membrane has been passed by virgins.

It would certainly be very reckless indeed to claim that "it is just the same thing as an abortion," or that "without sexual intercourse such products are not developed."

It would seem, then, that the diagnosis "endometritis exfoliativa" is not too "far-fetched," and that, after considering the opinions already quoted, such a term may be preferable to the old name of "membranous dysmenorrhœa." That such membranes can be and undoubtedly occasionally are cast forth by virgins who have never been suspected of having had sexual intercourse is admitted by most authorities. The theory that such membranes are *always* an imperfect product of conception, and only where sexual intercourse has taken place, is, it is to be hoped, sufficiently exploded to remain so for all time.

NEWPORT, RHODE ISLAND.

* Leishman, p. 218 *et seq.*, English edition.
† Edis, Diseases of Women, English edition, p. 450.
‡ Thomas, Diseases of Women, p. 621 *et seq.*

A CASE OF COMPOUND FRACTURE OF THE SKULL.

BY L. D. BROSE, M.D., PH.D.,
Physician to the Evansville Orphan Asylum.

A. H., æt. 3 years and 4 months, a strong, healthy child, while playing in the street on the afternoon of October 12, 1884, was kicked by a work-horse wearing a heavy, rough, iron shoe. He was picked up wholly unconscious, with bleeding from the seat of injury, and taken to his home near by. I saw the child with Dr. W. D. Babcock about an hour after the accident, and found him still unconscious, with a rapid and feeble pulse and widely-dilated pupils. Beneath the scalp there was much effused blood. Just in advance of the anterior fontanel there was a lacerated wound, but no fracture of the bone beneath. Above the right parietal eminence there was another lacerated wound, and a probe introduced here passed readily into the cranial cavity and revealed a single fracture of the right parietal bone, with much separation of the fragments. Our prognosis was that the child would live but a short while, and no further treatment was indicated save cold cloths to the head and a few drops of brandy.

Next day the boy had regained consciousness, was able to talk, but had complete paralysis of the left side of the face, and of the left arm and leg. Above each eye there was a bluish ecchymosis, but no subconjunctival hemorrhage. There was fever, with great restlessness and irritability. Ten grains of bromide of potash, every two hours, was ordered, and the cold applications continued. October 14 the paralysis had disappeared from the left leg and the face, but remained in the left arm. He vomited at times; otherwise his general condition remained as on the preceding day. Calomel, in small and repeated doses, was ordered until the bowels were moved. On the 15th and 16th he continued improving, and on the morning of the 17th, although there was still palsy of the left arm, the temperature became normal. October 18 he had a chill, followed by high fever and a very rapid pulse.

It was now decided to make an exploratory incision to liberate retained pus, and to elevate depressed bone if any could be found. With Dr. Babcock's assistance, the opening in the scalp communicating with the fracture was enlarged by an incision carried downward parallel with the fibres of the temporal muscle. Considerable blood was lost on this incision, from the fact that the middle temporal artery had been divided longitudinally. A second incision was started from the middle of the first, and carried directly forward along the line of fracture, ending about the middle of the coronal suture. At this point a piece of depressed bone, broken from the right parietal, was found, and removed with forceps, after first severing adhesions with the dura mater. The fragment removed embraced both tables of the skull, was wedge-shaped, with the apex posterior, and about two inches in length. Much pus escaped from the cortex of the brain after this incision. A third incision, joining the beginning of the last one, was carried backward to within a short distance of the lambdoidal suture to a point about two inches below the posterior fontanel, liberating more pus and broken-down cerebral matter. With the finger the entire length of the fracture could now be explored, extending from the middle of the coronal suture in front backward through the middle of the right parietal bone to the lambdoidal suture, and with a separation of this suture upward to the posterior fontanel, and extending for some distance between the left parietal bone and its articulation with the occipital bone. The separation along this entire line was as much as half an inch, and that in the right parietal bone was due to an outward bulging of the lower fragment. Strands of hemp were used for drainage, and the wound brought together over this by the interrupted silk suture. Our patient was now pulseless at the wrist and blanched from loss of blood. Ether had been used during the operation. A hypodermic injection of atropine was administered, and the boy placed in a warm bed. During the night he revived, became very restless, and by accident was permitted to remove the hemp drainage.

October 19.—His pulse was 160, and paralysis had again occurred in the left leg. Suppuration continuing freely, the stitches were all removed and the wound treated openly.

October 20.—The brain-matter has now protruded through the fracture, rising up above the scalp, and forming a large hernia cerebri along the entire length of my incision over the parietal bone.

The paralysis in a few days disappeared from the leg, and his general condition gradually improved until the 27th day of November, when he again had a chill, followed by frequency of respiration and a temperature of 103°. An incision was made into the separated lambdoidal suture over the fracture in the posterior part of the right parietal bone, but no pus was found.

November 28.—He feels sick, has severe bronchitis, and a pulse of 130.

November 29.—Pulse 160; patient complains of headache and chilliness, and has a temperature of 101°.

December 1.—Temperature 100½°; pulse 132. Calomel ordered in small and repeated doses, to open the bowels. During the night there was a separation of a scale of bone and a sudden discharge of matter from within the cranium. Next day, temperature normal, and paralysis has disappeared from both the leg and the arm, leaving the muscles very weak.

He was out of bed now every day until December 14, when he fell, striking a chair with the occipital bone near the seat of fracture. Considerable bleeding occurred through the wound, and the child became sleepy; he remained so throughout the next day until towards evening, when fever occurred, and, for the first time, irregularity of the pulse.

December 16.—The pulse intermits every six or eight beats; temperature 98°. The muscles are gaining strength slowly, so that he can walk across the room with simply some staggering. This also disappeared in the next week, and the hernia cerebri was destroyed by daily application of a ten-grain solution of nitrate of silver.

January 13.—Removed a piece of the outer table of the anterior third of the upper fragment of the parietal bone.

January 24 and 30.—Removed scales of bone from the middle third of the same fragment.

February 12.—Ether administered, and a long piece of the outer table of the posterior third of the upper fragment of the parietal bone was removed. The anterior half of the fracture is closed by a thin, soft tissue that pulsates synchronously with the respiratory act. The rest of the fracture was gradually closed by a similar soft, bluish tissue, and the

boy fully recovered his former strength and activity.

August 9, 1885.—By actual measurement, an opening in the skull still exists five and three-quarter inches long and three-quarters of an inch wide. The pulsation of the brain is distinctly seen through the cicatrix.

Recovery from this uncommonly severe injury is certainly remarkable, and makes the case worthy of record. There was also a suit for damages against the owner who had permitted his horse to run at large. The damages claimed was ten thousand dollars, and the verdict rendered by the jury was for five hundred dollars. It was distinctly shown the court that, although the boy had apparently recovered, he was still incapacitated from pursuing some of the ordinary avocations for a livelihood; that if he was struck on the top of the head a severe blow, the violence, instead of being distributed to the adjoining bones, as occurs in a normal skull, might crush in the upper fragment of the right parietal bone, which was now supported solely by its articulation with its fellow and the frontal bone in front, and cause the death of our subject. The verdict was set aside by the judge on the ground that it was not enough.

Since the defendant had before the trial conveyed all his property to friends, and then immediately after the judge's decision removed to Kentucky, no further action was taken in the case.

SPRAIN OF ANKLE-JOINT TREATED BY REST AND COMPRESSION WITH AN ELASTIC BANDAGE.

BY T. A. CUNNINGHAM, M.D.,

Captain, and Assistant-Surgeon, U.S A., Post-Surgeon, Fort Lewis, Colorado.

THE following case of severe sprain of the ankle-joint, successfully treated in a woman 60 years of age by the elastic bandage, may prove of interest.

Mrs. I., æt. 60, wife of Captain I., Twenty-Second United States Infantry, received a sprain of the ankle-joint on April 3, while moving her household effects from one house to another, her husband's quarters having been taken by an officer who ranked him. This regulation is known in the army as "turning out," and sometimes, as in this case, is a matter of serious trouble and inconvenience. I saw her about ten minutes after the accident occurred, and found the parts in the following condition. Sprain of the ankle-joint, rupture of the external lateral ligament, and the foot turned inward to such an extent as almost to amount to a dislocation; also effusion of the articular fluid. The foot was straightened and the joint well rubbed with lotio plumbi subacetas et opii, and then an Esmarch bandage, which had been condemned for its original use but still retained sufficient elasticity to compress the joint, was firmly and evenly applied to the entire foot and joint and for about two inches up the leg. The foot was kept in an elevated position, and the patient kept in bed.

April 4, 9 A.M.—Patient slept well, and has suffered no pain to amount to inconvenience. Bandage was removed, and the entire joint was found to be ecchymotic and very tender to the touch. The parts were well rubbed with camphorated oil and the bandage reapplied.

This treatment was continued, and at the end of the fourth day she was able to get up and attend to a few of her household duties, suffering no pain or inconvenience from the bandage, but rather regarding it as a support. She attempted sometimes to take off and do without the bandage, but she was compelled to come back to it, as she could not walk without it.

She was discharged at the end of three weeks, perfectly cured.

I consider the elastic bandage the treatment *par excellence* for sprains, if seen early and before much swelling has taken place, for the following reasons:

1. It promotes absorption of the effused fluid.
2. It prevents undue swelling.
3. It can be more smoothly and evenly applied, and by its resiliency supports and relieves the torn and sprained tissues much more satisfactorily, than an ordinary bandage.
4. It allows the patient, after a few days, to attend to nearly all of his or her ordinary avocations about the house.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE.

SURGICAL CLINIC OF DR. J. M. BARTON.

Reported by J. M. FISHER, M.D., Resident Physician.

FRACTURE OF THE INTERNAL CONDYLE OF THE HUMERUS.

THIS man, aged 32 years, a tall, stout, and powerful mechanic, had his right arm caught three days ago in the belt of some machinery. The whole arm is greatly swollen, especially so about the elbow-

joint. It is discolored by blood effused beneath the skin, and is quite painful. There is no deformity discernible further than that produced by the swelling. You see he carries it midway between full extension and a right angle, and carefully supports it with the other hand the moment I release it. Now carrying my finger along the posterior surface of the ulna, I am able to trace it its entire length, and to determine that there is no fracture of the shaft or of the olecranon. Then taking hold of the patient's hand with my right hand, and placing the thumb of my left hand over the position of the head of the radius, I attempt to rotate the limb, but, owing to the amount of muscular spasm, which renders the arm rigid, I am unable to do so to any extent,—not enough to feel the radial head through this amount of swelling, but sufficient to get some indistinct crepitation. As this muscular spasm interferes with my examination, I will have the patient etherized and then proceed with it. The patient, however, refuses to take ether. Under these circumstances we will refuse all treatment, and direct the patient to seek advice elsewhere; and let me here remark, gentlemen, do not permit yourselves to show any temper under such circumstances. The patient does not know the serious nature of a fracture about the elbow-joint, and, as there is no manifest deformity, thinks there can be but little injury. And, further, do not permit your sympathy for the patient or your cupidity to tempt you to undertake the treatment of such cases without first thoroughly examining them, under an anæsthetic if necessary.

If, owing to the importunities of the patient, you do so, and the arm is at all imperfect when the treatment is terminated, such patients are the first to sue you for damages for malpractice. Take a firm stand; let him seek other advice; or, if you are where other advice cannot be had, state in the presence of competent witnesses your reasons for wishing to give an anæsthetic, and carefully define your position before treating such a case.

Our patient, who has listened to these remarks, has now changed his mind, and desires to take ether. Having him fully anæsthetized, I readily rotate the forearm, and, finding the head of the radius rotating freely in its normal position, I determine that neither the ulna nor the radius is dislocated or fractured. Now, seizing the arm about its middle firmly with one hand and near the wrist with the other, I fully extend the arm and attempt to move it laterally.

You know the elbow-joint is a true ginglymoid or hinge-joint, and permits no lateral motion whatever in its normal condition; but this joint moves freely laterally, and the motion is accompanied by distinct crepitation. As we find the shaft of the humerus intact and the radius and ulna free from injury, this free lateral motion, accompanied by crepitation, indicates clearly a fracture of one of the condyles. Now grasping the humerus by both condyles, one with each hand, I find the inner one moves, and upon pressure crepitates. We therefore make the diagnosis of fracture of the inner condyle.

The arm can be readily extended under ether, and, as the broken condyle shows no disposition to upward or other displacement (if it did, the natural angle of 5° between the arm and forearm would be lost), I shall simply flex the forearm until it is nearly at a right angle with the arm, and place it in a sling made from a three-cornered piece of muslin, reaching from the elbow to beyond the hand, fastened with several stitches, so that the arm cannot be removed. I shall direct him to report here every other day, and if I find any deformity occurring I shall use such appliances as appear best adapted for its correction.

REMOVAL OF A TUMOR FROM THE MALE BLADDER.

This German, 36 years of age, from the interior of this State, has suffered for several years from cystitis. He now passes his water over fifty times in the twenty-four hours. During the last twenty-four hours he has passed water, by actual count, fifty-four times.

His difficulty began several years ago, with the passage of blood. It was not until he had passed blood several times that the bladder began to be irritable. He presented himself to me a year ago with the same symptoms. On examination at that time I found no evidence of any calculus, nor any prostatic enlargement. The urine then contained pus, phosphates, and the usual evidences of cystitis. I failed to detect at that time, though I made repeated microscopic examinations, any shreds of tissue from any foreign growth. With the sound, however,

I felt several places which were slightly elevated and irregular. The examinations were usually followed by hemorrhage, no matter how delicately the instrument was handled. At that time the bladder was washed out, several times daily, with a solution of borate of soda. He improved rapidly and left the hospital. This history was repeated a few months later, when he returned with his old symptoms. In a few weeks he was again relieved and left,—I promising him at that time that, if his disease returned, I would explore his bladder by an opening in the perineum.

To-day he again presents himself, worse than ever. He now urinates fifty-four times in the twenty-four hours, and frequently passes blood. The blood is not by any means fully mixed with the urine, but appears at the beginning or, more frequently, at the end of urination. He has been passing blood for four years. It was the first symptom noticed, and continued even when the cystitis was temporarily relieved.

If the blood came from the kidney, it would probably be thoroughly mixed with the urine, and would not be of the fresh, bright color of that passed by this patient. If it came from the urethra, it would, of course, appear at other times than during urination, and we would have some history of traumatism or some foreign growth or other obstruction detected on the introduction of the instrument. We can therefore exclude these two extraneous sources of the hemorrhage, and regard it as coming from the bladder.

The character of the clots will often give important information as to the source of the hemorrhage. By floating the clot in water its form can be readily studied. Coagula from the bladder are flattened and irregularly circular; when from the ureter, they are long and thread-like; when from the urethra, they are a cast of that canal; and when from the prostate, they are fusiform and flattened. Here they are evidently of vesical origin.

Now, hemorrhage from the bladder is caused either by stone, enlarged prostate, ulceration, or a tumor. As the result of some acute diseases, or from the effects of certain drugs, or from the vesical parasite the Bilharzia hæmatobia, blood is occasionally passed from the bladder. We can here regard it as coming from calculus, enlarged prostate, ulcer, or tumor.

In vesical calculus bleeding is not a common symptom, does not occur until the cystitis has become very severe, and is not frequent unless ulceration has occurred, and under no circumstances is it an early symptom, nor would it continue when the cystitic symptoms have been temporarily relieved.

The same remarks are applicable to ulceration in the walls of the bladder, no matter how caused.

In enlarged prostate, hemorrhage is not uncommon; but our patient is only 36 years of age, and is entirely too young to have his prostate much enlarged. However, we will examine by the rectum, and we do find his prostate slightly larger than normal. Fully to exclude the prostate from being the source of the hemorrhage, we can regard the cystitis and the hæmaturia as both springing from the same cause. Now, an enlarged prostate causes cystitis by first preventing the bladder from emptying itself by its mechanical effect: thus some of the water is retained, and the residual urine, becoming offensive, causes the cystitis. If the cystitis be due in this case to the slightly-enlarged prostate, the patient will have residual urine. I will therefore get him to empty his bladder as far as he is able, and, now that he has finished, I introduce this soft catheter into his bladder. No urine passes; the bladder is empty. So now we can exclude the prostate as being the cause of his cystitis and of his hæmaturia.

This exclusion leaves us some form of tumor as existing in his bladder, and the symptoms of some form of vesical tumor are well marked in this case. The early and constant hemorrhages are almost typical. It needs but some shreds of the growth to be found by the microscope to make the diagnosis certain. These we have not been able to find, though searched for several times. The most frequent forms of vesical tumor are papilloma, epithelioma, fibroma, and sarcoma.

As the disease has existed for several years, we can exclude the malignant growths, as they would by this time have either proved fatal or had more effect upon the patient's general condition, and, as the fibromas but rarely bleed, the diagnosis in this case is probably papilloma of the bladder. These growths may be pedunculated, but are more frequently attached by a broad base. Cases are on

record where growths rising but slightly above the surface of the mucous membrane and covering but a small area gave rise to the most severe symptoms.

With a cystitis of the intractable character that we have here, even without the strong probability of the presence of a tumor, we would be warranted in making an exploration of the viscus through the perineum.

Even in an idiopathic cystitis, if such a condition ever exists, such an incision may be used as a method of treatment on the failure of other measures.

Our patient now being well under the influence of ether, a large staff is introduced into the bladder. He is placed in the lithotomy position, and I make an incision in the median line, about one inch and a quarter in length, beginning one and a half inches in front of the margin of the anus, and extending nearly to it. After the first incision I feel for the staff and have it hooked well up under the pubes, so that I may not injure the rectum. Now, carefully avoiding the bulb, I cut through the membranous urethra and insert my knife into the groove of the staff at that point. Keeping my knife in the groove of the staff, I cut into the bladder; then, slightly lateralizing the knife, I incise the prostate at each side, so as to have free room for examination. You noticed that, just before introducing the staff, I injected the bladder with some warm water: by thus distending it and separating the walls I prevent their injury by the knife.

I now introduce my finger, and readily feel the entire inner surface of the bladder. There is no large tumor or other foreign material in it; but on the upper surface there is a soft, velvety mass. It is irregular, and covers probably two or three square inches of surface. I will seize a small portion with a long and delicate pair of forceps. On bringing it out and laying it upon a piece of paper, the characteristic shape and appearance of a shred of papilloma are readily seen. My colleagues who are here all agree regarding its characters.

Now, taking these curettes of various forms and guiding them carefully with my finger placed upon the vegetations, I scrape away quite a mass, which you see here. Again taking the forceps, I remove several larger pieces, using the scraper again until in this way I have removed all the disease I can detect. These manipulations are followed by rather free hemorrhage, which I think will readily cease without special treatment.

[Reporter's Note.—There was some bleeding for forty-eight hours, but not enough to require any treatment. The lips of the wound adhered the morning after the operation, causing retention and pain. This was relieved by the introduction of a large soft catheter through the wound into the bladder, where it was permitted to remain for three days. After its removal the urine was passed by distinct acts of micturition, most of it passing by the wound.

At the expiration of ten days the patient passed his urine but six times in the twenty-four hours, most of it by the urethra, a few drops only making their exit at the wound.—J. M. F.]

TRANSLATIONS.

A New Theory of Vaccination, and the Cause of the Regeneration of a Susceptibility to Variola.—Dr. S. Wolffberg, in the supplement to the *Centralblatt für Allgemeinen Gesundheitspflege* (Bd. i., Heft 4), gives an ingenious explanation of the prophylactic effect of vaccination in preventing smallpox, and of the cause of the subsequent regeneration of susceptibility,—a theory which is also applicable to other self-protective diseases. Pfeiffer considered that the increase of microbes in the blood was the principal agent in the systemic infection, and necessary to protect the organism. Wolffberg, however, regards vaccination as a selective process, which affords protection by eliminating those elements which are too weak to resist the action of the specific poison. The increase of the infective material takes place especially in the rete Malpighii of the epidermis, generally, and in certain of the mucous membranes; and everywhere it causes the specific alterations, which in the case of the vaccinia and variolous efflorescences are substantially identical. Now, the bacterium, in proportion to its intrinsic virulence and the resisting power of the elements of the epidermis to its destructive action, acts directly upon the elements of weaker resistance and they are thrown out. In the resulting reaction of the elements

of greater resisting power, the germs are forced into groups, in which they subsequently, more or less completely, undergo degeneration. After the course of the vaccination or inoculation has been completed, it is evident that only those elements remain which were able successfully to resist the virus. This elimination of the cells of feeble resistance proceeds very differently in vaccination, inoculation, and natural smallpox, but the stronger cells and cell-elements always remain; and, since it is through the increase of the latter that the epidermis is restored, immunity is in this way established. The primary susceptibility and immunity are, therefore, connected with the cells of the rete Malpignii. This principle of selection apparently may also be extended to the other infectious diseases which confer immunity, but it is necessary in each case to determine the earliest localization, and to study particularly the primary histological changes.

As regards the establishment of the susceptibility to smallpox, both statistics and experiment point to the conclusion that, as it is the rule after variola and a good vaccination to have the disposition completely extinguished, so it is an exception after variola, but the rule after a poor vaccination, to have the disposition only partially—*i.e.*, in a higher or lower degree—exhausted. In childhood, after the primary vaccination the susceptibility is gradually restored, so that at fifteen years of age revaccination should be practised, with even more care than in early childhood.—*Berliner Klinische Wochenschrift*, No. 29.

[This theory conforms closely with the view, so long held, that one attack of an eruptive disease usually protects against a second one by "exhausting the soil." The observations of Weigert (1874) established the fact that the destructive force of the variolous poison was first directed to the lower cells of the rete Malpighii, where Weigert and Cohn found micrococci.—Tr.]

Microbes of Normal Secretions and the Syphilis-Bacillus.—At the last meeting of the Académie de Médecine, M. Cornil read a communication relative to work done in his laboratory by Messrs. Alvares and Tavel upon the supposed microbe of syphilis. The conclusions attained after considerable investigation were as follows:

1. There exists in some normal secretions of the organism (smegma, etc.) a bacillus which has not hitherto been described.

2. This bacillus is identical in its form and color-reactions with that which Lustgarten has described as peculiar to syphilis.

3. It may be that the bacillus which Lustgarten found in his sections of the products and in the syphilitic secretions is only this common bacillus.

4. This bacillus bears a great resemblance in its form to the bacillus of tuberculosis, and presents several of the color-reactions considered hitherto as special to the bacillus of Koch and to that of leprosy.

5. It is distinguished from the tubercle-bacillus (besides its less thickness and its less granular appearance, conditions which are difficult to appreciate in a single examination) by its less resistance to alcohol after staining with fuchsine and treatment with nitric acid. It is also distinguished by the failure of Ehrlich's method for staining with methyl-violet.

6. In the clinical diagnosis of tubercle made by histological examination of the secretions, account should be taken of these facts. Although this bacillus has not yet been fully studied by cultures, the reporter believes that we should be very circumspect before admitting that the bacillus of Lustgarten is in reality the cause of syphilis.—*Le Progrès Médical*, No. 32.

Diagnosis of Chancroid.—In a doubtful case, time is the most important element in the diagnosis of the chancroid, although inoculability is a test which, according to Zeissl (*Annales de Dermatologie et de Syphilis*), without being absolute, greatly facilitates diagnosis. Inoculation with the secretions from the soft venereal sore produces an ulcer more rapidly than ordinary pus, which it is admitted is also inoculable when placed under the skin or on a surface deprived of its epidermis.

Ergot for Hiccough.—A correspondent in the *Lancet* calls attention to a new use for an old remedy. A policeman had hiccough which resisted all the ordinary means of relief, and he was passing into collapse, when drachm doses of liquid extract of ergot were ordered, with complete relief. Only three or four doses were required. After a period of rest the hiccough returned, but was again stopped by the ergot, and did not reappear.

PHILADELPHIA
MEDICAL TIMES.

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EDITORIAL.

INDIRECT CAUSES OF SUMMER DIARRHŒA IN INFANCY.

ALTHOUGH abundant opportunities for observation are supplied, it is evident from the writings of authorities that full accord has not yet been reached in the questions of the etiology, pathology, or treatment of bowel-disorders in young children in hot weather. It is probably true that twice as many infants die from this cause in summer in our large cities as die from it in the country, and that two and a half times as many die in cities from bowel-affections as die from other causes; but the most obvious explanation, that heat and peculiar conditions of city life are directly responsible for the great mortality, is by no means to be accepted without question. Some writers, regarding the bowel-disorders as the direct effect of the high temperature upon the nervous system, have not hesitated to recommend their treatment by cold applications, as if the symptoms were due to a sort of thermic fever. There is also a prevalent opinion that a change of air, a visit to the sea-side or to the country, is the panacea for all such disorders. It is certain that comfortable and seasonable clothing, and good hygiene, are important,—in fact, their importance can scarcely be overrated,—but there are other factors in the problem which deserve attention and may decidedly modify the treatment required.

In the first place, although the number of cases and the rate of mortality are associated with periods of excessively high temperature, it rarely happens that infants suffer from thermic fever or overheating. The suffering caused by the heat is indirect rather than direct, and may be due to deficient supply of oxygen, owing to long-continued rarefaction of the air, as well as to the presence of atmospheric impurities, which thrive in the heated stagnant air in particular parts of the city where filth abounds. The remedy for this would be not ice and cold bathing, but purer air.

Children are most likely to be attacked by entero-colitis after being chilled, as when the weather suddenly becomes cooler during the night. The clothing of the child should not, therefore, be reduced below the point of safety, nor should too much heat be abstracted from it by frequent cold bathing.

While it is undoubtedly advantageous for some children to be taken away from the city in hot weather, it is simply impossible for all. Nor is it a panacea for all who do go, for many are brought back as ill as when they departed, and deaths of babies at the sea-shore occur every summer. These considerations make us hesitate before issuing the mandate to take children away, or refusing to treat a case in the city. It is, however, a melancholy fact that many parents live under extremely unhygienic conditions, and, not being healthy themselves, cannot procreate healthy children. "Unfit to survive" is nature's verdict in many such cases; and when the little one gives up the struggle, the death is charged to "teething" or, too often, to "summer complaint." These children, as a rule, would die anywhere and under the best of care. Moreover, a greater proportion of the children are hand-fed in the city than in the country; and, as their digestive organs are constantly overtaxed by improper food, they frequently succumb in their second summer to digestive disorders. The milk that is supplied is rarely good and fresh. When the grass is burned up by the July sun and pasture is poor, cows are apt to eat everything; and after eating Rhus toxicodendron they give milk that will cause sick-

ness in children. Dr. Parkes* says that this does not happen where the milk is boiled; and this practice has received additional support from the possibility of the transmission of tuberculosis by milk, as shown by Chauveau.

The introduction of pepsin and pancreatin into infantile dietetics has done much to prevent the severe attacks of indigestion and bowel-disorder in infants habitually fed on cows' milk.

It is evident that much of the mortality of young infants in cities is inevitable under present conditions, that excessive bodily heat is not the sole or the essential cause of bowel-disorder in infants in hot weather, and that other measures are usually needed than simple change of residence.

THE NEW BUILDING FOR THE NATIONAL MEDICAL MUSEUM AND LIBRARY.

AT last, after years of weary and at times almost hopeless waiting, the great Medical Library of the Surgeon-General's Office and the Army Medical Museum are about to receive a safe and permanent home. Since the war, Ford's Theatre, the scene of the assassination of Lincoln, has been used for this purpose; but the danger of the total destruction of these magnificent collections by fire has been a source of grave anxiety to the Surgeon-General of the army and his assistants. Now, however, this danger will soon be past. The last Congress made an appropriation of two hundred thousand dollars for the purpose of building a fire-proof structure for the museum and library, and a commission has prepared plans and given out contracts for its construction.

The building will be mainly of brick and iron, and will consist of a central building, of one hundred and twelve feet front, flanked by wings of sixty feet front each. The depth of the wings, in which the museum and library are to be placed, will be one hundred and thirty-one feet.

The entire structure is to be built in the most substantial manner. The decorations will be appropriate, consisting of brick and terra-cotta mouldings and cornices, and a line of blue-stone trimming around the building at the height of each story. Crown mouldings, cornices, and lanterns will be of galvanized iron.

There will be very little wood-work about the building, in order to make it as nearly fire-proof as possible.

It is expected that the building will be ready for occupation in about a year and a half.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE event in the medical world lately has been the fifty-third annual meeting of the British Medical Association, which came off at Cardiff. Dr. William Thomas Edwards, physician to the Glamorganshire and Monmouth Infirmary, and the leading physician in the town, presided, and delivered the introductory address. He had not the learned leisure to prepare a philosophical address, he explained, so he gave some particulars of the town and neighborhood. Why several hundred medical men who are out on a pleasure-trip, each having dined well and sumptuously, should pack themselves like herrings in a barrel to hear the history of the town they are visiting, is one of those mysteries which will never be explained, even at the opening of all hearts. However, according to custom, and to evince their respect for the personal character of their President, they did so pack themselves while Dr. Edwards told them that at the commencement of the present century the population of Cardiff was but eighteen hundred, and that the coal was brought down from the hills on pack-horses to the small craft that then entered the Taff. Now they ship away twenty-five thousand tons of coal daily, and the long mineral trains on the Taff Vale Railroad extend for miles in an almost unbroken succession, with the consequence that passengers are at a discount, fares are high, and the train-service anything but encouraging to travellers. If the coal of England is to be exhausted in a given period, he said, Cardiff was doing its best to bring about

* Practical Hygiene, 5th edition.

the consummation. He drew a picture of Macaulay's New Zealander ("who at that time would probably speak Welsh," he threw in as a parenthesis) looking over the ruins of its docks and its piers. Whatever may be the case when the coal has been worked out, at present the country near Cardiff is simply seamed with railways. Up the valleys go the main lines, with branches innumerable running into every ravine and often climbing a height,—it does not matter where, provided there is coal at the end of it. Given the existence of a bed of coal which can be profitably worked, then the Welshman lays down a couple of rails and gets a locomotive on them, even upon a mountain-top, and then away goes the coal to the seaport.

In the development of the wonderful coal industry of South Wales, Cardiff has held a prominent part as the main seaport. Coal had brought wealth, and the leading landowner, the Marquis of Bute, had laid out his capital lavishly in docks, which have greatly added to the prosperity of the town.

Having impressed them with the importance of their surroundings, he proceeded to give a brief account of the advances recently made in medicine, and especially those in which the Association had borne a part. He eulogized the work of the Collective Investigation Committee,—a scheme for tapping the experience of the members which as yet has produced no very startling results, but which, he said, "will bear ample fruit." He also thought the Association "had done very much to raise the moral as well as the scientific status of the profession," and explained how it drew men together and made and cemented friendships, and so was doing a good work: all of which is possibly true and is certainly desirable. He paid a compliment to the profession at large, and spoke of medical men as—"putting aside all merely sordid and selfish considerations, they are governed by a pure love of science and an earnest desire to benefit their kind:" which tells that Dr. Edwards is a genial, kindly-hearted man, if not a great genius.

After this came the report of the Council, which was a very satisfactory one, telling of increasing prosperity and waxing growth. Then came the wonted discussions. First, the poor attendance upon the Council meetings, which, it was explained, was due to the different members of it having to pay their own expenses while engaged on the work of the Association. As the Association is now rich and putting by money every year, it was held by some that it ought to pay for its work. Then cropped up the question of new premises in London, and the investing of these savings in their purchase,—on which, of course, varying opinions were found to exist. Then about representatives of the branches opinions again varied. Some were in favor of the branches having representatives nonresident within their area, but these were overruled. So the principle of direct representation, having been adopted, is so hampered in the practical working that it is of comparatively little utility, and the rule of the Association is still, to a large extent, that of the favored few.

Next morning the great event was the address of Dr. William Roberts, F.R.S., of Manchester, the author of the excellent and well-known work on urinary diseases,—a bright, genial, active-minded little man, who is very popular. To him we owe most of what is known about the artificial digestive ferments and their utility in practice. He chose the subject of "Therapeutics" for his address, a fact which shows that the profession is beginning to think about what the patient expects for his money. He expounded the existing ignorance upon the subject, and insisted that the dietary of the sick must be based upon the dietetic customs of the healthy, and "these customs must be regarded as the outcome of profound instincts, which correspond to important wants of the human economy." He contended that systematic study of dietetics was not practised at the present day, in words as follows: "So far as I know, there is no systematic teaching of dietetics, even on the most limited scale, afforded to the student at any of our medical schools. He is left to pick up his knowledge of the subject as best he may during the earlier years of his practice, and he often ends by taking his own digestive organs as his type, and prescribes for his patients according to the likings and dislikings of his own stomach. This, I need hardly say, is a very unsatisfactory proceeding, for there is perhaps no subject in which individual experience is so fallacious a guide as dietetics, and none in regard to which it is more important to draw our inductions from a wide basis of facts."

So much for Dr. Roberts's opinion of modern medical teaching on this important subject. He then spoke of the dietetic arrangements of civilized countries as directed to the supply of nutriment to the body, after which he referred to individual necessities or idiosyncrasies requiring modifications: so that "we may distinguish in a rough sort of way the patients who seek our aid in the matter of diet into two classes,—namely, first, those who are able to take and to digest solid food, and to conform in the main with the general dietetic habits of healthy people; and, secondly, those more seriously sick, who can take little or no solid food, and must be fed on a plan deviating widely from the common custom." Speaking of variety of food being desirable for all, healthy and sick alike, he said, "This variableness or variety, we cannot doubt, fulfils some useful purpose beyond the mere gratification of the palate. It may then be inferred that to prescribe a monotonous regimen is to contravene a beneficial rule

and to depart from a salutary principle in human dietetics. We know that a healthy man soon rebels against a daily repetition of the same dishes, however wholesome and savory; much more an invalid, with weak appetite and feeble enjoyment of his meals, who craves for more change and variety than the robust." Quite right, Dr. Roberts; but how much time, toil, and personal experience are requisite to attain such a familiarity with the dietary suitable for the sick and invalid? Only those who have struggled with the question manfully can tell. "Another part of our duty," he continued, "is to study the peculiarities and idiosyncrasies of the invalid's stomach. Our stomachs are nearly as individual as our noses, and are very peremptory in regard to their likings and dislikings." And yet of this important matter no teaching exists in any of our medical schools! Probably after this address of Dr. Roberts's the authorities who rule medical education will waken up on the matter.

After some more honest, plain speaking, he went on to consider the effects of certain accessories to our food upon the digestive processes. His conclusions are highly interesting. Distilled spirits exercise but a trifling retarding effect upon the digestive process, while wine and malt liquors exercise a far more pronounced retarding influence. Consequently, we can comprehend why a little spirit-and-water has been found the best drink for the dyspeptic. Effervescing table-waters added to wines and spirits "may be looked upon as highly commendable in the case of persons of weak digestion." Tea was found to have an intense inhibitory effect on salivary digestion, while coffee and cocoa were less potent in this respect,—mainly because they were taken in weaker infusion.

He concluded by a long consideration on "Feeding the Sick with Liquid Food," of which no abstract is possible here, the matter being well worth study in its completeness.

The address on Public Medicine was delivered by Dr. Dyke, the kindly, well known, and respected medical officer of Merthyr-Tydfil. The valleys of the Taff Vale are deep sulci among high hills, narrow and long, with a multitudinous population, so that their sanitary arrangements have had to receive special consideration. The sewers run together at a point below the towns, where the sewage receives the lime and alum which throw down the objectionable matters, so that the effluent water which flows into the Taff is "considerably purer than the Thames water which we are often compelled to drink in London." The result is highly satisfactory. The water for the use of these towns is collected from the streams above them, which provides an ample supply, the districts forming part of the wealthiest area (or one of them) in the United Kingdom. In the whole arrangements self-help has been the motto of the people, and to elaborate arrangements is added close and keen inspection.

In the Medicine Section, Dr. S. Wilks, the famous pathologist, delivered an opening address on "Some Causes of Disease, and on Reparative and Destructive Processes." First came racial and family tendencies giving a liability to certain morbid processes. In England there were a number of conditions tending to bring about the gouty constitution and also to morbus Brightii. Disease is slow in progress, and commonly a long departure from health precedes what is regarded as acute disease in the healthy. Really acute disease is often an outcome of long-acting causes, and "peritonitis is usually but the termination of old disease in the abdomen, and a meningitis the ending of prior disease in the brain." In speaking of recent research, he said, "I cannot be blind to what is now occupying the medical mind, and therefore, with all sadness, confess the truth, my occupation's gone. It is of no use talking any longer of the conditions of our climate predisposing to phthisis; of the heredity of the disease, much less of any peculiar conformation of chest and frame in those who fall a prey to it: for the disease is due to a bacillus which may be taken by a husband from his wife, or *vice versâ*, or conveyed by a phthisical nurse to a number of children whom she suckles, or even indeed be caught in the street; at least this was suggested in the case of a lad who died of tubercular meningitis, having long had a sore tongue which was called tubercular. It was surmised that it was primarily a simple ulcer on which bacilli alighted as he walked through the streets." This is rather severe criticism, and demonstrates the absurdity of pushing the bacillus-explanation too far.

Dr. Wilks went on: "I do not for a moment attempt to throw any discredit on modern research,—for these bacilli undoubtedly exist, as any one may prove for himself; but I am rather offering myself for pity, that, having preached on one long text, that it is the great aim of the physician to seek the causes of disease in our ordinary surroundings and in the tendencies transmitted to us, and to try to remove them, I find my occupation gone. But perhaps I am only shunted to let the express pass by." After pointing to the relations existing between pathological research and the therapeutic management of disease, he said something about the proportion of organs to their use. If one kidney be destroyed, the other enlarges to compensate for the loss. The same probably occurs in other organs. Where a portion of the liver has been destroyed, the other lobe has proportionately enlarged; and in some chronic affections of one lung the other one has evidently grown to maintain the balance." Sometimes a certain tissue in the body will start into growth out of relation to the rest of

the body, as the spleen, for instance; or the adipose tissue may develop abnormally. Sometimes when important organs are chronically diseased, as in the kidneys, for instance, other organs take up their function and discharge it vicariously. Sometimes the disease in an organ is so extensive that the wonder is the individual survived so long and reached such an advanced stage. Renal inadequacy has been the subject of much attention of late. Many destructive processes are accompanied by reparative processes, involving, however, lowly tissue-material, and not normal and higher histological elements. Such is common in disease of the lung, and the semeia furnished are often due rather to the reparative than to the destructive process. In the pseudo-hypertrophy of muscles there is destruction of normal tissue, with a rank growth of new tissue functionally useless.

The address on Surgery was delivered by Prof. John Marshall, F.R.S., of University College, who contrasted the surgery of the past with the surgery of the present. He was one of Liston's dressers in 1844–45, and he compared the surgery of that year with that of 1884–85. The subject does not admit of abstraction, and those curious in the matter must study the address *in toto*.

Prof. Edward Bennett, of Dublin, presided over the Surgical Section, and chose for his opening remarks "Injuries of the Bones." He argued in favor of duplicate specimens in our museums rather than the present plan, and of extended pathological and clinical observation of bone-injuries.

In the Obstetric Section, Dr. Gervis, of St. Thomas's Hospital, discussed "The Death-Rates from Childbirth and Cancer; Value of Antisepsis in Midwifery." In the first matter he held our progress to be favorable. Of antisepsis he spoke favorably, though the machinery was cumbrous for ordinary practice.

In the Department of Public Medicine, Dr. D. Davies, Medical Officer of Health for Bristol, presided. He said, "Men eminent in science and celebrated for the originality of their investigations have endeavored to discover the real microbe which is supposed to be the immediate cause of cholera; but, alas! when some of us at least thought that we had discovered our mysterious enemy, the cup was dashed from our lips; doubts of a serious character have overcast our hopes. One eminent investigator has been swallowing the 'bacilli' of another equally eminent, to prove their innocence and inertness." With "unsatisfied aspirations," the workers have had to struggle with the disease.

In the Section devoted to Psychology, Dr. Yellowlees, of Glasgow, led off with a consideration of the "Causes and Prevention of Insanity." He said, "During the dark period when insanity was at once the reproach of medicine and the horror of the public, the mere suggestion that the nervous system required wise and watchful care was resented as an insult, because it seemed to impute a liability to mental disorder. Now that insanity is no longer deemed either a crime or a disgrace, there is some hope that the counsels and warnings of the physician may receive greater attention." He continued, "The causes of mental disorder group themselves at once into two categories: those arising from conditions in the life-history of the individual, and those entailed upon him by ancestral inheritance." These may coexist. Brain-injury in certain persons of the insane diathesis is very liable to start up changes which culminate in insanity. Brain-exhaustion from overwork is another common cause. Overwork is found everywhere at the present day, even on holiday tours. Work is often protracted and incessant, done for the best of motives; but this brain-exhaustion "is too high a price to pay for anything on earth." Alcoholic and sexual excesses are also potent factors in other cases. The first need not involve "a man being a drunkard before he can develop insanity or transmit it to his offspring." The practice of giving wine to children he strongly denounced. Of the second he spoke also in strong terms of all its forms. Then came brain-starvation, a factor in other cases. Irritation of the brain set up by disease elsewhere is another cause. Of inherited predisposition he said, it "is not a mysterious and fateful doom, haunting and dogging its victim, and sure one day to overtake and overwhelm him. It is a purely physical condition, and loses half its terrors when this is realized. But the man who is the inheritor of the predisposition should lead a life of healthful exercise of the brain, while he must not pore unremittently over the merchant's ledger, nor burn the midnight oil in exploring the arcana of science, and we must absolutely debar him from the rivalries of politics and the excitement of the stock-exchange." All taxation of the unstable brain must be scrupulously avoided. Indeed, the tendency to insanity must be treated rationally, like the tendency to phthisis. Dr. Yellowlees veritably spoke words of weight and reason, and probably most readers of the *Times* will see and enjoy his address in its entirety.

Henry Power gave the address on Ophthalmology, which, it is needless to say, was worthy of its gifted author.

Professor Fraser, of Edinburgh, opened the Section on Therapeutics, and expounded the properties of the *Strophuthus hispidus*, which seems likely to largely take the place of digitalis; Dr. Murrell remarking that, oddly, this year is the centenary of Withering's famous treatise on digitalis.

Of the work of the Sections nothing may be said at present, except that some reference

to the work done in them, and especially the discussion on glycosuria, may appear in a future letter.

On the whole, it may be said that the annual meeting of the British Medical Association is not losing its popularity exactly, but, amidst the amount of festivity and hospitality now obtaining, there cannot exist the enthusiasm for work which once prevailed. The consequence will be that, if some limit be not put to these, the meeting will lose its scientific character and degenerate into a huge social gathering, very pleasant and enjoyable in its way, but scarcely aspiring to be a scientific meeting, as it has been.

The Sections were thinly attended, and empty benches are not an encouragement to working members to prepare and read papers; while the interchange of views in animated discussions formed a great part of the value of the paper and its after-discussion. The meeting was a pleasant one, and it may be safely said that, of the wealth which has been dug out of the earth in South Wales, a considerable portion has gone down the throats of its owners (who did not grudge the visitors their share), and that, though much of the best coal has been worked out, South Wales is not yet a mere cinder.

J. Milner Fothergill, M.D.

Royat-les-Bains, France,
August, 1885.

Your Paris correspondent, taking his holiday, sends some notes from this place, after making a tour among the important mineral-water stations in the central part of France. *Pougues* is the first station (four hours out from Paris) of importance. It is an alkaline water, containing the bicarbonates in less proportion than *Vichy*, which was next visited. Vichy is eight hours from Paris, and its waters are so well known that I shall not stop to describe them. The number of visitors increases yearly: this year over thirty thousand people are expected. From Vichy to Royat is four hours more; or, in a direct train, it is nine hours' express from Paris to Royat.

Some experience in the treatment of cases sent to mineral springs enables me to indicate the forms of disease most appropriate for treatment at these stations. Most of the pamphlets which are distributed by the companies farming the waters seem to state that they will cure *especially* everything. Such a state of things is not only confusing, but misleading in practice. It is also a sure method of discrediting that which is really beneficial if properly classified. I believe a large number of our ailments can be modified and often cured by the proper use of the natural mineral waters of France, *used at the springs*, and I am led to wonder, by proved results here, why advantage is not taken of the rich mineral-water springs in America. I know a number of good springs all over the United States of which but little or no use is made. I remember an iron spring in Fairmount Park which may be of great use, but I am willing to wager something that the medical faculties of Philadelphia don't know anything of its chemical composition.

It is indispensable to study not only the nature of the case, but also the quality of the water and the proper way of using it. If this be scientifically carried out, we can get certain results. It is done here, and thousands of cures are made yearly. Seeing this induces me to raise my voice for some special study of our American mineral waters, so that these important therapeutical agents will be brought more into use in the United States than they have been. How many physicians send patients to springs for serious treatment in America? I am sure very few, except those who have some rich patients who want some amusement at Saratoga and one or two other springs, such as Bedford, etc. Here there are thousands of springs, and some hundreds are of great value.

The law of France is that any one finding a mineral-water spring must declare it to the government, which appoints a *médecin-inspecteur* of the water, to see that its use is regulated. It is then examined, and, if found of use, may be declared of "public utility" by government chemists. Then it is often sold to a company, who farm it; but their charges are watched over by a *médecin-inspecteur*, appointed to reside at the springs.

A description of Royat will give an idea of how these waters are used. It is a small town situated in the bed of a charming valley of the Auvergne Mountains, some fourteen hundred feet above the level of the sea, and, like many mineral springs, it is in the midst of extinct volcanoes. The springs were well known to the Romans, as indeed were most of the mineral baths which abound in this part of France, as the discovery of several piscine baths of the Roman epoch attests. It is curious to notice that the Romans knew that air was not so good a conductor as earth, so they surrounded their baths with air-chambers to retain the natural heat of the waters.

The mineral springs here, although of the same type, chloro-alkaline, differ in their mineralization and their temperature, and show a marked difference from the purely alkaline waters of which the Vichy waters are a model. Royat waters contain the salts of soda, potash, and lithia as alkaline elements, the depressing effects of which are counteracted by the tonifying properties of the salts of iron and arsenic, which, combined with the stimulating effect of the carbonic acid in the waters, render them very powerful and active. One spring, the "Eugénie," throws one thousand quarts of water per minute, at 96° F. It is used for drinking,

and also supplies a large bathing establishment. There are no less than eight springs in all. One of them, the "St. Victor," is a strong ferro-arsenical water, containing four and a half milligrammes of arseniate of soda. A new spring has just been opened this week. It was discovered by M. A. Chassan, who is the *régisseur* of the thermal establishment. The qualities of this new spring are strongly arsenical. It is at present being analyzed in Paris, but from a hasty analysis made it is thought to contain fifteen to seventeen milligrammes of arseniate of soda, a quantity that will place Royat above "La Bourboule." This last well-known arsenical water contains too much chloride of sodium, and in this the new Royat water will surpass it. Dr. Boucomont, an eminent physician of great experience, member of the Hydrological Society, is the *médecin-inspecteur* at Royat, the new spring coming under his inspection. After examination of its properties, Dr. Boucomont has named it "Source Fowler." So here we have a natural liq. potass. arsenitis, or Fowler's solution.

Royat waters act strongly on all atonic diseases, such as anæmia, chlorosis, and debility of special organs; but one of their great virtues is their peculiar action on all diseases which spring from a gouty habit. This action they owe to the properties of lithia in the water. In a few words, the principal diseases treated here with success are catarrhs of the respiratory tract and of the various organs; next, gout and rheumatism in all its forms, even when it invades the viscera; then that class of skin-affections called *arthritides*, such as eczema, sycosis, pityriasis, etc. The principal indication for Royat is the probable gouty diathesis; and it is really wonderful how catarrhs of the respiratory tract yield to their action.

Not the least remarkable of the Royat springs is one that contains a proportion of *mineral tar* that is very useful in bronchial troubles. The waters are taken by half-glasses at intervals of twenty minutes, both morning and evening, the number increasing to a maximum of eight and then decreasing to two. Baths and douches are ordered, as well as spray. THOMAS LINN, M.D.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held June 3, 1885, the President, Dr. J. M. DA COSTA, in the chair.

Dr. HENRY LEFFMANN read a paper entitled

A PLEA FOR THE MEDICINAL USE OF PURE ALCOHOL AND ALCOHOLIC MIXTURES OF KNOWN COMPOSITION IN PREFERENCE TO ORDINARY FERMENTED LIQUIDS.

I present to the College this evening, with some misgivings, I confess, a topic which can scarcely yet be considered a "live issue" in clinical medicine, but which is destined, I am certain, to become one. At the present time the profession does not take kindly to suggestions having in view material modifications of its policy in reference to alcoholic liquors. The majority of physicians regard those who preach or practise total abstinence, or throw doubt on the indispensability of alcohol as a therapeutic agent, as entitled to little respect or tolerance. In presenting the view that we should abandon in clinical medicine the use of the natural wines and liquors, and resort to mixtures confessedly fictitious, we must expect to encounter all the force of the conservative spirit. Many centuries of constant use have developed in the race a feeling that fermented drinks, particularly those that, like wines and malt liquors, have suffered no modification by distillation or admixture, are bounties of nature wisely given for our use. The traditions of the past associate the first preparation of liquor with the gods, and in all ages poetry and prose have combined to increase the reverence for these natural products. Yet all this feeling is nothing but a superstition. Fermentation is now known to be a process occurring under the influence of micro-organisms, and it allies itself with ordinary putrefaction. The reverence which we have for "nature's laboratory" is born of ignorance, and there is no progress in chemistry more gratifying in its results than that which deals with dispelling the illusions which have surrounded its application to medicine.

Whatever ulterior relations the plan advocated here may have to the questions of total abstinence are not presented for discussion. I merely offer it as a contribution to the methods of exactness and certainty in clinical work.

In the medicinal and dietetic use of fermented liquors it is the effect of the ethyl alcohol which is sought to be obtained. It is true that those who prescribe liquors a great deal are in the habit of saying that the accessory ingredients, compound ethers, astringents, or bitter principles, etc., are also efficacious; but if we closely observe the customs of such prescribers, it will be found not only that the effect expected from the alcohol outweighs that to be obtained from any other ingredient, but also that in the majority of cases the accessory ingredients are either not known or not recognized.

Take this fact, then, as a starting-point, that an agent universally recognized as one of powerful physiological activity should be used only in the most definite condition. The forms of fermented liquors are numerous, and

each form is subject to minor variations, depending on locality and season. The demand exceeds the supply, and hence the strong temptation to dilute and substitute. Within the past few months further notice has been given of the communications by American consuls abroad to the effect that the wines and brandies exported from France and Portugal are fictitious articles in the majority of cases, and it needs but a little inquiry to show that a very large trade in liquors more or less spurious is carried on over the entire world.

Chemical analysis still has much to accomplish in the study of fermented liquors, but enough is known to enable us to imitate their essential features. The tabular statement of composition gives us a long list of mineral ingredients, but we are reasonably certain that, besides the ethyl alcohol, the only ingredients that need attention are the traces of fusel oil, compound ethers, astringent and bitter principles, and the effect even of their accessories is often more on the mind than on the body.

I suggest first, then, that in all cases in which the general physiological effect of ethyl alcohol is desired, it should be given by prescription, in the form of a rectified spirit of standard strength. My friend Dr. A. W. Miller, who is familiar with this topic both from the point of view of the pharmacist and physician, has suggested that such a standard pure spirit be made officinal under the title *spiritus maidis rectificatus*. Such a suggestion is in the interest of clinical accuracy and safety to the patient. If the medical profession have any concern in the protection of the health and morals of the community,—and it would certainly appear that it has great concern,—no better opportunity is offered for good work than in reforming the wide-spread errors in reference to the use of alcoholic liquors. Where is the physician who would say to a patient, "Take a little laudanum or chloral every day," and leave to the patient or the druggist the duty of determining the dose or the duration of the treatment? Yet every day physicians give similar recommendations in regard to liquors. The use of rectified spirits in prescriptions is to be recommended on the same ground that we give potassium bromide and iodide in accurate dosage, instead of the sea-water which contains them, or morphine and quinine instead of opium and Peruvian bark. Incidental to the therapeutic accuracy and moral safety which are involved in such practice, is the not unimportant question of cheapness. Many liquors command prices far above the actual commercial value of the ingredients they contain. A pure French brandy, for instance, costs twelve dollars per gallon. Its place can be taken by a spirit of much less cost.

Several objections may be made to the plan of using the plain spirit. I cannot stop to consider the one which arises from a belief in the superiority of a natural product, from a view that that which arises from a natural process will be necessarily superior to anything artificial; this, as I have said before, is a superstition; but there are some suggestions which are really important. It may be that the accessory ingredients have some therapeutic value, and it has been said to me that while pure alcohol may easily be used during acute disease and in hospital practice, in long-continued treatment, and as a dietetic, patients cannot be made to take it. In these cases the method to be pursued is plain. Let the alcohol be mixed with suitable accessory ingredients. If a combination of bitter tonic, sedative, and stimulant is wanted, it can be prescribed; and so on. There need be no difficulty in the matter, because modern art in the preparation of fictitious liquors has reached such perfection that excellent imitations of the natural liquors are made, and these have the advantage of definite and known composition and greater cheapness.

It is not uninteresting to note here the general nature of this work. I have the samples to illustrate it. In the preparation of fictitious liquors three methods may be employed:

1. The genuine liquor may be diluted with a suitable strength of pure spirit. This will give us a liquor differing but little from the original.

2. The liquor may be imitated by adding coloring and flavoring ingredients to pure spirit. In many cases this will give a liquor substantially identical with the original.

3. The liquor may be made weak, and the taste and appearance of alcoholic strength be given by means of pepper and bead oil.

The latter method is reprehensible, but the two former methods are, I hold, not injurious, and should be recognized.

DISCUSSION.

Dr. A. W. MILLER said: I have listened with much pleasure to the reading of this paper, for the subject is one in which I have taken considerable interest for a number of years, and I have myself written several papers on it. I doubt whether Dr. Leffmann is entirely correct in speaking of these liquors as being made by art. It is simply following a well-known law of commerce and bringing those products from countries where they are abundant to those countries where they are scarce. In making whiskey we use alcohol produced by fermentation of corn, which is the cheapest article from which it can be made in this country. This is passed through percolators containing charcoal, sometimes animal and sometimes vegetable, which absorbs all the fusel oil and coloring-matters. When this process is carefully performed we have an absolutely pure spirit, which is made of such strength as to contain fifty per cent. of alcohol by volume. To flavor this we import from Germany, where rye whiskey is one of the cheapest forms, the oil of rye, which is

there a waste product in the rectification of rye whiskey. When this is diluted to a proper strength it can be used as a flavoring material.

Brandy is made in nearly the same way. The flavoring material is obtained by distilling with sulphuric acid the refuse of the grapes from which the wine is made. There is only one pound of this obtained from a ton of the so-called mark. When this is properly reduced it may be used as a flavoring ingredient. These are not the only ingredients used in flavoring, but they are all harmless in the small proportions used. Another of these flavors is acetic ether. This is also present in the natural product. The peculiar bouquet of high-priced wines is probably due to the presence of acetates, and to the products of oxidation of fusel oil, producing valerianic acid and subsequently valerianates of ethyl and amyl. These are present in an infinitely small proportion. Artificial rye whiskey contains only one part of amylic alcohol in ten thousand parts; brandy, only one in fifty thousand. In addition to acetic ether there is formic ether in brandy, and also butyric ether. All these things are used by confectioners in flavoring candies, and, so far as I know, no one has suffered from their use, although they are used in larger quantities. There is another point,—namely, that liquor-dealers insist upon having a wholesome article, while many of the confectioners are not so particular.

The cordials which have been shown are made from the rectified spirit, with the addition of aromatics and syrups.

The curaçoa is almost an exact representative of the simple elixir of the Pharmacopœia. This is a very useful manner of administering a mild form of alcoholic beverage, and is to be preferred on account of having the sanction of the Pharmacopœia and on account of having a definite strength. This is another point in favor of the use of artificial liquors. The rectified spirit always contains fifty per cent. of alcohol. The natural liquors vary greatly, sometimes falling to forty per cent., and sometimes, as in rum, reaching seventy-five or eighty per cent.

I might say here that the unpleasant taste of ordinary diluted alcohol is probably due to the amylic alcohol, which is more soluble in strong than in dilute alcohol. Not being thoroughly combined, it causes a disagreeable taste and odor.

The economical value of these substitutes has been referred to. The rectified spirit can be bought for one dollar and twenty-five cents per gallon, and its therapeutic value is equal to that of brandy at ten dollars per gallon.

I have proposed the name *spiritus maidis rectificatus* because it designates the particular kind of grain from which this alcohol is derived, and prevents it from being confounded with the spiritus frumenti, which is now officinal.

Dr. JOHN GRAHAM: At the Franklin Reformatory Home some three hundred cases of alcoholism are treated annually. For the last two years none of the ordinary alcoholic drinks have been used, but we have employed rectified spirits variously medicated. In the mild cases alcohol is not used, but in the severe cases it is. The results have been equally as good as when the ordinary liquors have been used. In devising these substitutes for ordinary liquors, we must be careful that we do not injure instead of aid the temperance cause by the introduction of new drinks. In regard to dose, we consider one teaspoonful of rectified spirits to equal two teaspoonfuls of brandy.

Dr. LUDLOW: I would like to ask to what the term oil of cognac is applied? also, whether Dr. Miller has noticed any difference between the so-called California brandy and so-called French brandy? I have tried the California brandy, and it seemed to me as if red pepper had been added to it.

Dr. MILLER: There are different varieties of oil of cognac. The best is that which is obtained by acting with sulphuric acid on the residue of the grapes after pressing out the juice. As I have said, there is only about one pound obtained from a ton of residue. It is a complicated compound of the higher ethers. Some artificial oils of cognac are made by the action of nitric acid on oil of rue, others by the saponification of castor oil or cocoanut oil and the subsequent decomposition of the soap thus formed by sulphuric acid.

As far as my experience goes, California wines and brandies are perfectly pure. Their low price offers no incentive to adulteration. It is well known that brandies from different localities have different flavors. The California brandy also probably never reaches the age of the French brandy.

Dr. WILLIAM HUNT: I have frequently made the observation that in low forms of disease where alcohol is called for, the odor cannot be detected in the breath so long as the patient is not getting too much.

Dr. J. M. DA COSTA presented, for Dr. JOHN GRAHAM, the following paper on

CASES OF POISONING BY CARBONIC OXIDE DUE TO A DEFECTIVE FURNACE-PIPE.

On March 9 I was called to see the following cases of poisoning from the inhalation of carbonic oxide, the poisonous gas being conveyed by the hot-air flue from one of our ordinary cellar-heaters to the sleeping-apartments of the patients. Their history will show how necessary it is to overhaul our heating-apparatus, from chimney-top to ash-pit.

The heater was situated in the middle of a large cellar, had been in use for a number of years, and each autumn had undergone some

repairs. It consisted of the ordinary iron heater, enclosed by brick, forming a hot-air chamber. Inside the air-chamber was a terra-cotta pipe, running from the heater and penetrating the wall of the chamber, thence to the chimney, to carry off the products of combustion. This pipe was cracked for eighteen inches of its length, the crack being open half an inch; and, unfortunately, the crack was in the air-chamber.

This break is now known to have existed for several years; but up to the time of which I write it had apparently produced no worse effects than annoying the family with a smell from the heater. Something more was needed to change the chronic poisoning into acute. The chimney furnished the addition needed. Like too many of its kind, it had several angles, when it might just as easily have been perpendicular from cellar to roof. It formed part of an outside wall, and the frost had loosened some of the bricks near the top, which, falling down and lodging at one of the bends, partly obstructed it. Complaints came from servants that the heater drew badly, but the cause was never carefully sought for.

Steadily the disintegrating effects of frost and air on brick and mortar continued, until at the time of the accident the chimney was completely blocked. Of course it is highly probable that on the day in question a more than ordinary quantity had fallen, blocking it suddenly; else we should have had our patients complaining of sickness as well as smells, which they did not.

The patients—Mr. R., aged 78 years, Mrs. R., aged 74—went to bed on the evening of March 9, about ten o'clock. Both were in perfect health and good spirits, and the only thing Mrs. R. remembers noticing was that the smell from the heater was a little stronger than usual. Fourteen hours after, the servant, alarmed at their not appearing to her calls, broke in the door and found them unconscious.

When coal is burned with a free supply of air,—which, of course, necessitates an unobstructed chimney,—the chief product is carbon dioxide. When burned with a deficient supply of air, as when the outlet is obstructed, the product is carbonic oxide. The first is poisonous when inhaled in sufficient quantity; three per cent. of the latter has been shown to produce death in animals in thirty-seven minutes. Carbonic oxide is a little lighter than atmospheric air, and when heated ascends rapidly.

In the case of my patients, the obstructed chimney diminished the supply of air to the fire, and the resulting product was carbonic oxide. Its tendency was to ascend. The chimney allowed no exit, so the crack in the terra-cotta pipe gave out the deadly product, and it ascended by the convenient hot-air flue to the open register in the bedroom, which, with closed windows, contained its unsuspecting victims.

Carbonic oxide is tasteless and odorless. We cannot recognize it by any of the special senses. The products of ammonia, sulphur, tar, are what make up the odors from burning coal.

When found, Mr. R. was breathing rapidly, with loud bronchial râles, and his skin was dark and congested. Both had vomited some time during the night, and their mouths were covered with frothy mucus. Their extremities were cold; pupils dilated and insensible to light.

Patients were allowed plenty of fresh air. Whiskey was given by the rectum, also hypodermically. Ammonia was given by the mouth whenever they were able to swallow, and warm applications were made to their bodies.

In the case of Mr. R., the labored breathing increased, the blood became more and more carbonized, and he died thirty-six hours after the discovery of the accident, without regaining consciousness. There was no failure in his heart, the pulse being full, but increased in frequency. He evidently died from pulmonary œdema. His chest was dull on percussion, the lungs filled with fine râles. For a few hours before death his temperature rose rapidly, and reached as high as 106°. He had no paralysis.

Mrs. R., when found, was pale and breathing almost imperceptibly. The same means were used in her case to produce reaction, and slowly and gradually the heart's action increased; by degrees the intellectual faculties were aroused, and the patient with much effort was able to inform us that from the time of going to bed until the return of consciousness all was a blank. She had suffered no pain; remembered nothing. Her pulse at this time was 60, small and compressible. Respirations 14; temperature below normal.

She was kept in the horizontal position. Liquid nourishment was given, with small doses of whiskey, and Basham's mixture (℥ss four times daily). The brain worked slowly, and she spoke only when roused up, and then dropped back into semi-consciousness. The tongue was coated, and had a slight tendency to dryness; bowels costive; appetite poor.

Her improvement progressed slowly, but at the end of seven days she was able to sit on a chair by the side of the bed. The pulse increased somewhat in volume, but the patient remained drowsy, falling into the same dull condition unless when roused by noise, of which she complained greatly, saying it hurt her head. She also complained of intense pain in her back, running down the legs. At no time in the progress of the case did her urine contain either albumen, sugar, or tube-casts. Her blood was not examined.

Patient continued in about the same condi-

tion for three weeks following the accident, the Basham's mixture having been succeeded by pills of carbonate of iron and the whiskey omitted. Pulse 60 to 70; temperature varying greatly from slight causes, from 98° to 103.5°, but usually normal; anæmia very marked.

On the morning of the twenty-first day following the accident, the patient, while sitting on a chair, was taken very ill. A deadly pallor overspread her countenance, the jaw dropped, the limbs relaxed, and she became unconscious, convulsive twitchings passing through her body. We quickly placed her in the recumbent posture, and, after a hypodermic of whiskey, she slowly opened her eyes and asked, in an excited tone, "What is the matter?"

The supposed cause of the sudden change was that our patient's digestion since commencing the iron had been gradually growing worse, the tongue drier and more coated, the appetite poorer.

I had realized that this digestive trouble was from the iron, but continued it up to this time on account of her profound anæmia. I now reluctantly stopped it, and put her on dilute muriatic acid, ten drops every three hours, with pepsin after food, and enjoined absolute rest in the recumbent posture. The temperature on reaction reached 102°; pulse 120. The pupils were still further dilated; the reasoning power was all gone; she answered questions with difficulty and in monosyllables. The tongue became very dry, and it was almost impossible for her to protrude it. Stools were watery, frequent, and involuntary.

At this time the patient was seen by Dr. J. M. Da Costa, who advised the continuation of the acid, careful nourishment, and keeping the bowels open.

The treatment resulted favorably. In forty-eight hours the tongue regained its moisture, the appetite improved, and the dulness of the mind diminished, though the patient still continued to have delusions and hallucinations, and the memory for certain words (and familiar words) was poor.

On Dr. Da Costa's second visit, on the twenty-sixth day of her illness (April 3), the acid alone having been continued in the mean time, our patient was much better, tongue moist and clean, bowels natural, and, except the anæmic appearance and mental dulness, she was doing well.

We then put our patient on the same diet, milk, beef-tea, mutton-broth, etc., without solids, and, stopping the muriatic acid, gave tinct. ferri chlor., ten drops, liq. potass. arsenitis, five drops, four times daily.

This treatment was continued off and on until April 19, the forty-second day of her sickness, when it was finally abandoned. Its use for a few days was invariably followed by dry tongue, loose bowels, and increased mental disturbance. This was also the case when we tried the arsenic without the iron. On resuming the muriatic acid, the tongue would regain its moisture, the bowels become regular, and the mind somewhat improved, but the anæmia, as shown by feeble pulse, pale skin, and bloodless conjunctiva, continued.

On April 19 I noticed twitching in her left forearm, which was firmly flexed on the arm, and the hand on the forearm; the mouth was slightly drawn towards the left side. I then stopped the iron and arsenic and returned to the muriatic-acid treatment.

The rigidity of the left arm was followed by partial loss of power in the same, the patient raising it with difficulty, and not being able to grasp with it as firmly as with the right. Her mouth became drawn still farther towards the left: it was, therefore, a case of alternate paralysis. She swallowed with increasing difficulty, and had involuntary movements of urine and fæces. Sensation in the fingers remained good.

Patient remained about the same, except that the bowel-movements decreased in number and the tongue regained its moisture after again substituting muriatic acid for iron and arsenic, until Dr. Da Costa's third visit, on April 26, the forty-ninth day of her illness.

He advised the continuation of the muriatic acid. She also had an application of dry cups to the back of her neck.

The paralysis, which we concluded was probably caused by an effusion near the base of the brain, slowly passed away, but the anæmia was almost as marked as ever.

On May 5 we began the use of ferri phosphas cum ammonio citrate, gr. ii dissolved in ten m. of distilled water, hypodermically, daily; but, as it was followed by some hardening of the cellular tissue and produced disturbance of pulse and temperature, we abandoned the use of the iron hypodermically and gave it by the mouth in two-grain doses morning and evening, also continuing the muriatic acid.

From this time the improvement was progressive. The appetite increased, bowels became regular, the left hand and arm continued to regain their power, the deviation of the mouth to the left steadily diminished, and the patient became interested in her surroundings, and asked and answered questions with increasing intelligence. The pupils gradually diminished in size, and on May 20, seventy-three days after the accident, our patient was sitting up, and four days after was able to walk into an adjoining room.

DISCUSSION.

Dr. J. M. DA COSTA said: In regard to this case, which has been so thoroughly worked out by Dr. Graham, there are several points which strike me as being of special interest.

In the first place, the serious parts of the case came on late. For a time the patient was

apparently doing well, and then in the midst of the affection she is paralyzed with a comparatively rare form of palsy, with paralysis of one side of the face and of the other side of the body. This was preceded by muscular twitchings. The case seemed to be hopeless, but she got over the palsy in ten or twelve days.

Another point was the persistence of anæmia, with all that that implies, including anæmia of the brain. The aphasia, also, was very marked. This was all the more striking, because she was a woman of decided mental force and culture and ready expression. The extreme aphasia which was present for a time was probably due to low nutrition of a portion of the brain from anæmia.

Another point, and one which has been well brought out by Dr. Graham, is in reference to the therapeutics. Until quite late in the case the symptoms were aggravated rather than improved by the use of iron. Improvement always followed the use of muriatic acid, and it is to this and the steady nutrition that her recovery is to be attributed. Late in the case, a form of iron which I have found to be well borne, the phosphate of iron with citrate of ammonium, was well tolerated and well digested; but this may have been due to the fact that the patient had so far convalesced that she could digest iron, whereas previously she could not do so.

Dr. HENRY LEFFMANN: Poisoning from carbonic oxide is essentially different from that by most other gases, in the fact that a compound is formed by the carbonic oxide and the hæmoglobin which is very difficult to break up. The compound formed by carbonic acid and hæmoglobin can easily be broken up by increasing the tension of the free oxygen present in the blood, but the carbonic oxide compound cannot be. The anæmia was due to the modified condition of the hæmoglobin, and not to the absence of iron, and therefore did not yield to the ordinary remedies. An examination of the blood by the micro-spectroscope and a counting of the blood-cells would doubtless have yielded important results.

Dr. J. L. LUDLOW: It may be of interest to mention the cases of two students of the University, who came near being suffocated by coal-gas some years ago. They were attended by Dr. Jackson, who sent to Dr. Hare's laboratory and procured a bag of oxygen. The lives of both were saved.

Dr. FRANK WOODBURY: I would regard both of the cases reported as mixed asphyxia with only partial carbon monoxide poisoning. A case of pure carbon monoxide poisoning is one of sudden death, thus differing materially from carbon dioxide. A cubic inch of carbon oxide is said to be sufficient to destroy life in an adult human being. These cases are interesting from the manner in which they occurred. Cases of acute coal-gas (*i.e.*, gases resulting from the more or less perfect combustion of coal) poisoning are not very rare. Not long ago I saw a family of five who were nearly asphyxiated by sleeping in a room with the windows closed and a range burning in an adjoining room, the cover of which had accidentally been left off. All these cases readily recovered under the use of diffusible stimulants and oxygen. I could cite other cases, if needed.

Cases of chronic coal-gas poisoning are more frequent than is commonly supposed.* A prominent physician of London—Sir Andrew Clarke, I think—said, in a lecture some years ago, that half of his patients got sick and got well again without his knowing what was the matter: meaning, I suppose, to illustrate the truth of the fact that there are many minor ailments to which no distinctive title can be given. I think it possible that a large number of these slight disturbances of health are due to coal-gas poisoning. They may be transitory, or may extend over a considerable length of time. A gentleman, largely engaged in his office, complained of frequent headaches, drowsiness and a tendency to fall asleep when reading, mental sluggishness, depression of spirits, and of loss of appetite. This continued for some time, and it was feared that there was some grave disorder of the brain; but the special senses were unimpaired, the muscular reactions were good, the dynamometer revealed no loss of power, and the patient when away from his office for a few days enjoyed excellent health, although never robust. It was subsequently discovered that there was an obstruction in the flue of the range in the room below. Owing to the obstruction, the gas penetrated the bricks into the heater which supplied the office and sleeping-rooms, in the manner described by the lecturer of the evening. The only thing which saved the patient from more serious consequences was a hobby for ventilation and the habit which he had of sleeping with open windows. After the obstruction was removed, he soon recovered his usual health.

We have heard a great deal of late about sewer-gas, and the danger of stationary washstands in sleeping-rooms and of drains in cellars. Would it not be well to pay a little more attention to the dangers of coal-gas in our houses, and inquire into the state of the flues from ranges and heaters as possible sources of some of the minor ailments from which we suffer?

AMERICAN DERMATOLOGICAL ASSOCIATION.

THE Ninth Annual Meeting of the American Dermatological Association was held on the 26th, 27th, and 28th of August, at the

* Article upon "The Dangers from Coal-Gas in our Houses," by W. Thornton Parker, M.D., in *Philadelphia Medical Times*, March 21, 1885, page 450.

Indian Harbor Hotel, Greenwich, Connecticut. The meeting was very well attended, nineteen members being present.

After a brief address by the President, Dr. J. E. Graham, of Toronto, read a paper in which he gave the history of a case of extensive ulcerative syphilide in a young girl 16 years of age. When first seen by the reader, the disease had been in existence between four and five years, and had during that time gradually increased. It commenced a little above the right wrist, and extended over the forearm and elbow to the middle third of arm. The ulceration was followed by cicatrization. Another ulcer existed beneath the left clavicle. The patient was put under antisyphilitic treatment: hydrargyrum bichloride and potassium iodide, together with the local application of a mild mercurial ointment. An immediate improvement took place, and in about two months the ulceration had entirely healed.

The case presented the following points of interest:

1. The extensive nature of the disease. It had not been treated for syphilis, and had consequently spread.

2. The ulceration appeared when the patient was twelve years of age. She had not, so far as could be learned, had any early manifestation of syphilis.

3. She inherited the disease from her father, who was known to have had syphilis. Her mother remained quite healthy.

4. The great difficulty in making a diagnosis between syphilis and scrofuloderma, as at first no syphilitic history could be obtained.

Dr. F. B. Greenough, of Boston, read a paper entitled "Clinical Notes on Psoriasis." According to Dr. Greenough's experience, psoriasis occurs in about two and a half per cent. of all skin-diseases. The first outbreak of the disease occurred in a large majority of the cases between the tenth and thirtieth years. In about one-third of the cases heredity seemed to have some influence in determining the disease. Dr. Greenough dwelt quite fully upon the diagnosis of psoriasis, pointing out clearly the characters differentiating it from other diseases which might be confounded with it.

A paper by Dr. S. Sherwell, of Brooklyn, on "A Moot Point in Psoriasis," gave the opinions of a large number of authors upon the relation between psoriasis and the bodily health otherwise of the patients.

Dr. J. N. Hyde, of Chicago, read an elaborate paper upon the "Relations of Lupus Vulgaris to Tuberculosis." While patients suffering with lupus rarely exhibit any other evidences of tuberculosis, Dr. Hyde is of the opinion that the researches of Koch and others show pretty conclusively that lupus is simply a local tuberculosis of the skin, with little tendency to produce general infection.

As bearing upon the same question, Dr. J. C. White, of Boston, read a paper on "The Treatment of Lupus by Parasiticides." Dr. White, accepting the view that lupus is a form of tuberculosis, has treated it successfully with germicidal agents. The remedies used were bichloride of mercury in the form of ointment (the strength of the application used varies from one-half grain to two grains to the ounce) and salicylic acid. The treatment had, in twelve cases quoted, given much satisfaction. Dr. Hyde proposed a modification of the bichloride application, consisting of two grains of the bichloride to the ounce of compound tincture of benzoin. This forms a closely-adhesive impervious dressing, and gives good results.

Dr. Rohé referred to the successful results of the treatment of lupus with concentrated lactic acid, according to the method of Prof. Mosetig-Moorhof, of Vienna.

Dr. White also presented a report of two cases of "Angioma Pigmentosum et Atrophicum." The patients were brothers, aged 15 and 3 respectively, of Russian-Polish family. In the older patient the affection exhibited in a striking manner its three principal pathological features: an almost universal lenticular melanoderma, large areas of atrophied integument, and a considerable development of telangiectasiæ. So far as could be judged by a study of these cases, the process is primarily a melasma, the atrophia cutis and new growth of blood-vessels being sequelæ and very subordinate processes in extent. In the child of three years the disease was confined to the face and hands, and was represented only by the melanodermic condition. In neither case was there an apparent beginning of the epitheliomatous change in the skin which so generally forms the last step in this mysterious series of pathological processes.

Dr. Hardaway, of St. Louis, read a paper on the "Electrolytic Treatment of Port-Wine Mark of the Skin." In Dr. Hardaway's hands, electrolysis had given better results in the treatment of this deformity than any other method he had previously tried.

The Committee on Statistics, of which Dr. Hyde is chairman, reported that returns of fourteen thousand and seven cases of skin-disease were received by the committee.

Although probably of little practical importance, since the records are by no means complete, the variations in the various diseases reported from the different cities are curious. Thus, Baltimore reports the largest number of cases of fibroma, scrofuloderma, pediculosis pubis, and ainhum,—"facts certainly pointing," as the chairman of the committee well remarks, "to a large negro attendance upon the clinics." The Philadelphia records excel in the preponderance of keloid. St. Louis reports the largest number of cases of pigmentary nævus; Boston, of the various forms of alopecia and tinea circinata; New York, of sudamen, urticaria, dermatitis traumatica and calorica, herpes zoster, acne, tinea tonsurans

and versicolor, impetigo, molluscum epitheliale, callositas, lichen planus, and pediculosis corporis. Chicago furnishes the largest number of lupus vulgaris and erythematosis, hypertrichosis, angioma, carcinoma, pruritus, and syphilis, although in the latter it exceeds the New York report by one merely.

The number of cases of scabies reported was four hundred and forty two, of which nearly one-half were reported from Boston. Four cases of leprosy were returned, two from New York and two from Chicago. One of the latter occurred in a native of the latter city who had never come in contact, to his knowledge, with a case of leprosy.

Dr. A. R. Robinson, of New York, read an abstract of an elaborate research on "The Histology of the Vegetable Parasitic Diseases." He dwelt particularly upon the anatomical seat of the fungus in favus and ringworm. The paper gave rise to an active discussion, but nothing of importance was elicited beyond the fact that considerable differences of opinion existed among the members as to the relation between the general health of the individual and his liability to attack by the vegetable parasitic diseases, and the influence of the general condition of the system upon the prognosis and treatment of these diseases.

Dr. C. Heitzmann, of New York, gave an account of his investigations upon the "Structure of the Derma and the Development of an Elastic Tissue in it." He stated that Prof. Stricker, of Vienna, had recently acknowledged the accuracy of his (Heitzmann's) observations which were published some years ago in a paper read before this Association.

An interesting case of painful myoma of the skin, with illustrative casts, drawings, and microscopic preparations, was reported by Dr. Hardaway. The case had been diagnosticated as one of neuroma, but the microscopic examination showed that the neoplasm consisted of muscular tissue.

Dr. R. B. Morison read notes of a unique case of "Tylosis of the Hands." The patient was a negro fireman with the following history. He had been employed at his present occupation about ten years. His hands were almost constantly exposed to severe friction and a high temperature. Both hands were covered by patches of greatly thickened epithelium. There were likewise ulcerations, which were, however, entirely painless. Portions of the bones of the fingers could be extracted without causing the slightest sensation of pain. The case in this particular was very remarkable.

In the discussion on this case, Dr. Tilden suggested that it bore some resemblance to the affection termed by the French *mal perforant du pied.*

Dr. G. H. Fox, of New York, showed a photograph and related two cases of Dysidrosis.

"The Relation of Herpes Gestationis and certain other Forms of Disease to Dermatitis Herpetiformis" was the title of a paper by Dr. L. A. Duhring, of Philadelphia. Dr. Duhring has for several years paid a great deal of attention to this class of cutaneous inflammations. He believes that a large number of affections described by various authors under different names, as herpes gestationis, impetigo herpetiformis, hydroa, etc., are probably similar in nature. He proposes the name dermatitis herpetiformis for these various affections. He believes that in many of the cases the ultimate cause of the eruption is to be sought in the nervous system.

Dr. G. H. Tilden, of Boston, read a paper, illustrated by photographs and microscopical preparations, on the disease first described under the title "Mycosis Fongoïde." Cases have since been described by other authors under various names, but it is generally considered as multiple sarcoma of the skin. Dr. Tilden, however, does not consider the case described by him as sarcoma. The microscopical examination by Dr. Gannett shows that the growths are similar in structure to a lymphatic gland. The case died of exhaustion. No autopsy was obtained.

In the discussion, the general opinion of the members seemed to be in favor of the sarcomatous nature of the affection.

Dr. Le Grand N. Denslow, of St. Paul, read a paper upon "Urethral Irritation as a Source of Certain Neuroses and of Acne." He found in certain cases of acne strictures of large calibre, and promptly cured the acne by dilating or cutting the strictures.

Dr. C. Heitzmann, of New York, made some remarks on "Electrolysis and other Practical Topics." He recommended the Leclanché battery for electrolysis of hairs, on account of its steady action. Six large cells are necessary.

In seborrhœa of the scalp, Dr. Heitzmann has found the crude oleum rusci to give him the best results. He uses it in combination with some fatty preparation. The pomade contains from ten to twenty per cent. of the tar.

In freckles he has used with good effect an ointment composed of white precipitate, 3.75 grammes; magisterium of bismuth, 3.05 grammes; glycerin ointment, 30 grammes. This is applied nightly in a thin layer over the face.

Dr. Robert W. Taylor, of New York, read a paper on "Syphilitic Reinfection." He gave a rapid account of the literature of syphilitic reinfection, and added four cases to those previously reported.

Dr. H. W. Stelwagon, of Philadelphia, read a paper entitled "Observations on the Oleates." The writer regretted the lack of reliable observations concerning the action of the oleate preparations. The paper is limited to the use of oleates in cutaneous diseases. Personal experience, somewhat extended, places

in question their therapeutical importance. The oleates of mercury, lead, zinc, and bismuth, in the writer's judgment, are the only oleates that have proved of service. The oleate of mercury, in the inunction-treatment of syphilis, is not comparable to the blue ointment. In fact, the ready absorbability of the former mercurial preparation is questioned, clinical observation in this respect being in accord with the experiment made by Dr. Brubaker, of Philadelphia, to determine the same question.

The oleate of mercury, in the form of a twenty-five-per-cent. ointment, is especially valuable in the treatment of ringworm of the scalp, and the same, or a somewhat weaker ointment, equally efficacious in tinea sycosis. The writer has found oleate of copper of very little value. The oleate of lead, melted with an equal part or more of lard, forms a soothing and astringent ointment, and an efficient substitute for diachylon ointment. Oleate of zinc in ointment, compared to oxide of zinc, is more astringent and stimulating, but more apt to disagree. As a dusting-powder, the conclusion reached is that it is impracticable, as in the presence of heat and moisture (that of the skin is sufficient) it becomes sticky. The oleate of bismuth, with lard or alone, forms a soothing ointment.

In view of the difficulty of securing good preparations, the disagreeable oleic-acid odor, the costliness, the frequency of unlooked-for irritating effects, and other disadvantages, the writer concludes that the oleate of mercury is the only preparation that promises to hold a permanent value, and even that recedes from the importance of a few years ago.

Dr. Denslow read brief notes of "A Case of Syphilitic Aphasia and Paraplegia followed by Death; with an Account of Autopsy."

The following officers were elected for the ensuing year:

President.—Dr. Edward Wigglesworth.

Vice-Presidents.—Drs. I. E. Atkinson and A. R. Robinson.

Secretary.—Dr. G. H. Tilden.

Treasurer.—Dr. H. W. Stelwagon.

The next meeting will be held at the Indian Harbor Hotel, Greenwich, Connecticut, on the last Wednesday in August, 1886.

G. H. R.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

A STATED meeting was held April 25, 1885, the President, DANIEL LEWIS, M.D., in the chair.

THE COLLECTIVE INVESTIGATION OF THE COMMITTEE ON HYGIENE REGARDING FIBRINOUS PNEUMONIA.

Dr. G. A. SEIBERT made the report, first giving the results of the collective investigation of disease made by himself and other workers, dating from 1879. The report which he was about to make regarding collective investigation of fibrinous pneumonia instituted by this Society was based upon returns from forty-six practitioners and four hospitals, being all the physicians in New York and Brooklyn who had responded to the invitation sent them to record their observations. The returns showed the exact date of the commencement of the pneumonia, and also whether there was pre-existing catarrh of the respiratory tract. Seven hundred and eighty-eight cases of primary fibrinous pneumonia were reported, being the largest number of cases ever observed anywhere in one city for scientific purposes. The distribution of the cases over the different months of the year was as follows: January, 71; February, 140; March, 103; April, 73; May, 55; June, 37; July, 26; August, 25; September, 53; October, 62; November, 65; December, 78.

Thus we noticed that winter and spring showed the greater number of cases. The same facts were true of a large number of cases of pneumonia occurring during ten and eleven years in the German and Austrian armies and in certain hospitals of Europe. It was evident from charts exhibited that here as well as in Europe by far the larger number of cases of fibrinous pneumonia occurred in the winter and spring, and the least number in the summer. That which was true of pneumonia was likewise true of catarrh of the respiratory tract. The charts exhibited showed, above, the temperature-range for the several months of the year and days of the month, and likewise, below, that of the humidity of the atmosphere, while dots at the foot of the lines showed the days on which the wind had a greater velocity than fifteen miles an hour, and showed its direction. At the top of the lines were red lines, indicating the number of cases of fibrinous pneumonia which occurred on the several days of the month and year. When the temperature was low and the humidity great, the two lines extending across the chart approached each other, and at this time it would be found that the number of red lines at the top of the chart indicating the number of cases of fibrinous pneumonia were markedly increased. There was often also a corresponding velocity of the wind-currents. When the temperature- and humidity-lines were widely separated, the number of cases of fibrinous pneumonia was decreased.

Summing up the results of their investigations, Dr. Seibert said, they found:

1. That the origination of fibrinous pneumonia was greatly favored by certain meteorological conditions, thus explaining the difference in its frequency during the twelve months of the year.

2. Low and falling temperature, high and rising humidity, and high winds were each alone capable of exercising this influence.

3. If all these weather-constituents were found together,—that is, high humidity and cold air or falling temperature, high winds, etc.,—we noticed more cases of pneumonia than when they existed alone.

4. If these three constituents were found together, then there would exist an astonishing number of cases of pneumonia.

5. This frequency of pneumonia would continue so long as these conditions prevailed.

6. The same meteorological influences were found in catarrh, and existing catarrh predisposed to fibrinous pneumonia.

These observations were of a most positive character, but Dr. Seibert would not say that pneumonia was brought on by weather-influences alone.

DISCUSSION.

Dr. A. JACOBI said it had struck him that no remarks were necessary where charts were so eloquent. Dr. Seibert had shown that collective investigation was of the greatest value, at least in the etiology of disease. He trusted the members of the Society would pay particular attention to the form of chart employed, because they would probably be called upon to give the result of their observations for use at the next meeting of the International Medical Congress. It appeared that the author had acted on the good old scientific and empirical plan of medical investigation, for it must be remembered that medicine was an empirical science,—science based upon the close observation of facts. Pathological anatomy and the microscope were not able to supplant empirical knowledge derived, after the manner of the ancients, by observation of disease. At the present time the attempt was being made to find the etiology of all important diseases in the existence of particular bacilli, but in Dr. Jacobi's opinion the truth was to be arrived at only when pathological anatomy, microscopy, the presence of germs, etc., were appealed to in support of clinical observation. Some physicians, in their zealous support of the germ-theory of disease, had claimed that pneumonia, being due to the presence of a particular coccus, could not be excited by what the people called taking a cold: yet persons sitting at an open window of a railway-car, and being struck by a draught, felt chilled, they took a cold, pneumonia developed, and they insisted that the sudden draught was the cause of the disease. Here the people had observed facts, and those physicians who held, on a theoretical basis, that taking cold could not produce pneumonia would be compelled to accommodate their theory to facts, for facts were greater than theory. If we took into consideration the effect of the conditions of the atmosphere—mentioned by the author as being present when the greatest number of cases of pneumonia developed—upon the fourteen square feet of surface of skin covering the human body, we need not be surprised that variations in the state of the weather should be accompanied by an increased number of cases of pneumonia. The possible effect of a change of weather upon the human body, especially upon the internal organs, was well illustrated in a case under his observation,—that of a man who had hæmoglobinuria on every exposure to inclement weather. The term "taking cold" was a good one, being expressive, and would probably continue to be used.

Dr. A. G. CAILLÉ noticed by the charts that the state of the atmosphere had been observed three times a day. He thought once a day would have been sufficient, and would have involved less work. The author had said that he believed a combination of the weather-constituents alone was not sufficient to cause fibrinous pneumonia. If he meant thereby that there might be other causes, Dr. Caillé said he could agree with him; but if he meant that exposure to cold would never cause fibrinous pneumonia, but only catarrh, he begged to differ from him. He thought it entirely premature to claim that the pneumonia-coccus must always be present before pneumonia could be developed. He moved that a vote of thanks be extended to Dr. Seibert for his valuable work. The motion was adopted.

Dr. L. PUTZEL said that the months during which most cases of fibrinous pneumonia occurred were also the months during which certain other infectious diseases were most prevalent. During the state of weather mentioned, people were likely to be shut up in their houses under conditions most favorable for developing an infectious disease. He thought the testimony of many physicians, based upon clinical investigation, was to the effect that fibrinous pneumonia was an infectious disease. The crisis was such as was not present in inflammation due to the taking of cold. There was no doubt as to the effect mentioned by Dr. Jacobi of cold upon the mucous membranes, but catarrh did not run the clinical course of pneumonia. Statistics should always be taken with a good deal of allowance.

Dr. SEIBERT, in closing the discussion, said he had purposely abstained from theorizing on the facts presented. His belief was, however, that the sole influence of the weather in pneumonia was that of causing hyperæmia, which prepared the ground for the pneumonic poison. In erysipelas, for instance, there always existed previous lesion of the skin.

A MEMOIR OF LOUIS ELSBERG, M.D.,

was then spoken by Dr. C. HEITZMANN.

THE LEHIGH VALLEY MEDICAL ASSOCIATION held its fifth annual meeting at Quakertown, Pennsylvania, August 19. Addresses were delivered by Joseph Thomas, M.D., President of the Association, by Benjamin Lee, M.D., Secretary of the State Board of Health, and by Dr. De Forest Willard, of Philadelphia.

REVIEWS AND BOOK NOTICES.

MODERN THERAPEUTICS: A Compendium of Recent Formulæ and Specific Therapeutical Directions from the Practice of Eminent Contemporary Physicians, American and Foreign. By GEORGE H. NAPHEYS, A.M., M.D., etc. Edited by JOSEPH F. EDWARDS, M.D., and D. G. BRINTON, M.D. Eighth Edition, enlarged and revised. Philadelphia, J. G. Brinton, 1885.

This is not a mere *formularum præceptor*, but presents the art of therapeutics in a different manner from that ordinarily followed by systematic works upon that subject. Modern prescribing is taught by the presentation of carefully-selected models, applicable to the treatment of a large number of morbid conditions; but the scope is wider than this, for the general hygienic and therapeutic methods are discussed in each case, in addition to the magistral formulæ. The popularity of the book is shown by its appearance in its eighth edition.

A PRACTICAL TREATISE ON THE DISEASES OF THE EAR, INCLUDING A SKETCH OF AURAL ANATOMY AND PHYSIOLOGY. By D. B. ST. JOHN ROOSA, M.D., LL.D., etc. Sixth Edition, revised and enlarged. New York, William Wood & Co., 1885. Cloth, 8vo, pp. 718.

The marked appreciation and favor shown by the medical press and the profession to this work on its first appearance, eleven years ago, have been sustained through five editions, and are well merited by the sixth, which shows evidences of thorough revision and of judicious selection of new material. A practical treatise, designed for the advanced student, and for the physician of general practice, as well as for those with special interest in otology, it is written in a style to adapt it to each for frequent reference. Illustrations and illustrative cases are given freely, and add greatly to the interest and usefulness of the work, which is so commonly used as a text-book that further reference is unnecessary beyond this mere announcement of its appearance in a revised and enlarged form.

HAND-BOOK OF DISEASES OF THE SKIN. Edited by H. ZIEMSSEN, M.D., Professor of Clinical Medicine in Munich, editor of Ziemssen's "Cyclopædia of the Practice of Medicine." Illustrated with Eighty Wood-Engravings and Color-Prints. New York, William Wood & Co., 1885.

The publication of the American edition of Ziemssen's "Cyclopædia of Medicine" was an enterprise which required the co-operation of the American medical profession in order to make it successful. Messrs. Wood & Co. took the risk of satisfying their subscribers to the translation, and succeeded beyond their expectations, as the work received cordial support from the profession. Having completed the original task, although the work had largely exceeded the proposed limits, the publishers now have issued a supplementary volume, of large size, handsomely illustrated, embodying the latest information on skin-diseases, and this volume is to be presented gratuitously to the thousands of subscribers to the Cyclopædia. Any subscriber who has failed to receive it should send his address to the publishers.

A GUIDE TO THE DISEASES OF CHILDREN. By JAMES FREDERICK GOODHART, M.D., etc. Revised and edited by LOUIS STARR, M.D. With Formulæ. Philadelphia, P. Blakiston & Co., 1885. Cloth, 12mo, pp. 738.

This is a well-digested, compendious treatise upon the principal diseases of childhood, in forty-eight chapters. The descriptions are clear, and the indications for treatment distinctly stated. With regard to membranous croup and diphtheria, the author gives it as his opinion "that there are grounds sufficient for a belief in the existence of a non-diphtheritic as well as of a diphtheritic membranous laryngitis; but, inasmuch as it is admittedly impossible to distinguish readily and certainly in doubtful cases between the two, and the question of contagion is involved in the decision, it is best to consider all cases as diphtheritic, and to take precautionary measures in accordance with that assumption." The additions of the American editor have been made with discretion, and add to the value of the work.

GLEANINGS FROM EXCHANGES.

INOCULATION OF INTERMITTENT FEVER.—Prof. Gerhardt recently abstracted some blood from a patient while the latter was suffering from a seizure of intermittent fever, and inoculated with this blood two healthy persons. His results are detailed in the *Zeitschrift für Klinische Medizin*. He observed and insists upon the following precautions:

1. The locality in which the inoculation is to be made must be totally free from malaria.

2. The persons whose blood is employed for this purpose must not suffer from syphilis or any other inoculable disease.

3. The persons to be inoculated must agree to the experiment and voluntarily subject themselves to it.

4. The temperature-record of the individuals to be experimented upon must have been carefully kept for some time preceding the experiment, and evince not the least increase of temperature. They must have been at the time of the operation, and for a long time preceding it, utterly free from all febrile symptoms.

The experiments themselves gave the following results:

1. The intermittent fever caused in this manner, by inoculation, is distinguished from the natural malarial fever by greater irregularity of the attacks of the former.

2. After a number of single or groupwise attacks, a regular quotidian, analogous to the form present in the original source, developed itself in the one person on the twelfth day, in the other on the twenty-fifth.

3. The fever thus artificially produced reached in both cases such a high degree (temperature as high as 106° F., and duration of fever fully twenty-four hours) that the experiment had to be interrupted by the administration of quinine.

4. There is no doubt that the pathogenic element of malaria is present in the blood of a patient suffering from intermittent fever at the time of a seizure, and that it is then, together with the blood, inoculable.

5. With very few exceptions, all the seizures by which the inoculated persons were attacked set in at the hour at which the inoculation had been made, or if they had not done so (as was the case a few times) they reached their acme at that time. The period of incubation was difficult to determine: the first febrile movement made its appearance in the one case on the seventh day, in the other on the twelfth, and the graver series of seizures began in the one on the seventeenth day, in the other on the twenty-fifth.—*Indian Medical Gazette.*

Remedies for Skin-Diseases in the Form of Spray.—Dr. Hardaway highly recommends spray as a vehicle in the treatment of affections of the skin. His usual habit is to prescribe a solution of definite strength from which the bottle of an ordinary hand-ball apparatus is filled, and the patient is then directed to throw the fine spray on the parts affected. Any substance that is "sprayable," either in its liquid form (diluted or pure) or in a state of solution, may thus be employed,—*e.g.*, carbolic acid, sulphate of zinc, lotions of grindelia robusta, thymol, liq. picis alkalinus, and fluid cosmoline (medicated or not). In the case of the fluid cosmoline, the tube of the atomizer should be large. The spray finds its greatest range of usefulness in diseases affecting large areas and in that class of disorders accompanied by itching and a more or less unbroken cuticle,—viz., pruritus, urticaria, papular eczema, and the like. In generalized pruritus he had had good results from spraying on a lotion of the following sort: carbolic acid, three to four drachms; glycerin, one ounce; and water, a pint. After the bottle of the atomizer had been filled, he sometimes directs the patient to add from five to ten drops of the oil of peppermint. The atomizer-bottle should be thoroughly shaken before the bulb is compressed, in order to diffuse the peppermint through the mixture, as otherwise it would merely float on top. In many instances the spray is far superior to mopping on lotions with a sponge or rag, being neater and less troublesome, getting the remedy more evenly and uniformly applied over the surface, and usually giving more speedy relief.—*Journal of Cutaneous and Venereal Diseases*, vol. iii. No. 4.

Cerebral Infantile Paralysis.—Dr. Strümpell has well described this somewhat neglected disease in an article of which the following is a condensed abstract. *Polioencephalitis acuta* occurs usually before the end of the first year,—sometimes, indeed, in the first weeks of life. It begins acutely without any apparent cause, with fever, vomiting, general convulsions, and unconsciousness. These symptoms disappear as quickly as they began, leaving behind them, as a rule, complete paralysis of one-half of the body, which soon, however, in part disappears. The arm and leg usually remain more or less paralyzed, while the facial muscles are restored, though sometimes there is slight strabismus. In other cases the paralysis is a monoplegia, or a sort of ataxia alone is perceptible. There is never any degenerative atrophy of the muscles, though the growth of the affected limb is retarded. The paralyzed limbs are slightly contracted, and there is an exaggerated tendon-reflex. Most of the patients suffer from subsequent epileptic attacks, which may be general or affecting only the paralyzed side. Athetosis is a very frequent accompaniment. In right-sided paralysis the speech is not infrequently affected, and the patients are usually imbecile, though the intelligence may not be weakened. Sensation is unimpaired. The seat of the disease is in the gray cortical substance in the motor region, where in older cases parencephalic lesions are always found. No autopsies have yet been made in the acute stage of the affection. The author remarks on the resemblance to spinal infantile paralysis, and believes that the two affections may be due to the same or similar etiological factors.—*Practitioner;* from *Centralblatt für klinische Medicin*, January 31, 1885.

Salicylic Acid and Castor Oil in Psoriasis.—Dr. Fox, of New York, showed, at a meeting of the New York Dermatological Society, a girl, 8 years old, who had psoriasis covering all the body. The patient's father and sister also had psoriasis. When she was admitted to the hospital a two-per-cent. solution of salicylic acid in castor oil was applied to the right arm, a weak solution being used because of the great congestion of the skin. When the patient was shown, the scaling was less, and many of the patches had disappeared, although the disease was extending in other directions. To the left arm the mixture of oxide of zinc and balsam of

Peru had been applied, and there was even less congestion in this situation. In the second case the lower extremities were chiefly affected. This patient was peculiarly susceptible to the action of ammoniated mercurial ointment, even a very small quantity exciting severe dermatitis. Chrysarobin pigment had been applied to the right leg, and a five-per-cent. solution of salicylic acid to the left leg, producing a marked improvement in the condition of the eruption in the latter situation.—*Journal of Cutaneous and Venereal Diseases*, vol. iii. No. 5.

Buried Sutures.—Mr. C. B. Keetley describes under this head sutures which are completely covered by the skin and do not involve that structure at all: they are strongly recommended to be used in all operations in which deep structures are involved and where rapid union is required. The use of these sutures enables operations such as excision of the hip to be performed without the use of drainage-tubes in the after-treatment of the wound. The method of applying these deep sutures is thus explained by the author. Suppose an operation to be performed with the object of uniting the two ends of a deep nerve that has been divided. After the ends of the nerve have been united, whatever muscles or aponeuroses had been divided in cutting down upon the nerve would be restored to their original relationships and kept there by aseptic animal sutures; then the wound in the deep fascia must be separately sewn up, and finally the wound in the skin must be closed with catgut, or silver, or whatever is preferred. The results to be expected from this method of procedure are these:

1. There is no need for drainage-tubes.
2. The sutured muscles and aponeuroses are eventually restored as regards function.
3. Deep, rough, and depressed cicatrices are avoided.
4. Necrosis of bone and sloughing of soft tissues are avoided.

The author also states that he has found these sutures very successful in dealing with sebaceous cysts of the head. Having dissected out three from the scalp of a gentleman, the remaining cavities were obliterated by two sutures in each, passing them well through the floor of each small wound. No cutaneous sutures were used at all; the skin-wounds did not gape. A little salicylic acid dissolved in ether, and a little powdered salicylic acid, were placed over the wounds. The patient went about his usual business, and a fortnight afterwards the scab was removed, leaving three sound linear cicatrices.—*British Medical Journal*, May 2, 1885.

Effects of Nerve-Stretching on the Spinal Cord.—In the *Archives de Neurologie*, Dr. Pauline Tarnowski reports that, in rabbits, elongation of the sciatic nerve was followed by serious lesions in the spinal cord. The central canal was distended with plastic exudation, hyperæmia, and extravasation of the gray matter (especially in posterior cornua), proliferation of the nuclei of the neuroglia, increase of connective tissue in the posterior cornu of side operated upon, with disappearance of nerve-tubules. The formation of new connective tissue commenced on the seventh day after stretching the nerve, and in a month there was decided atrophy of the posterior horn of the affected side. The nerve-cells of the anterior horn were less numerous than on the operated side; they were degenerated, and showed signs of vacuolation and actual disappearance. These morbid signs are more common in the lumbar enlargement of the cord.

MISCELLANY.

Mistakes in Dispensing Drugs.—During last week, two young girls in Hoboken lost their lives by the mistake of an apothecary who carelessly substituted morphine for the quinine ordered; just as in the recent case in Baltimore, in which a child was killed by muriate of morphine, which had been dispensed instead of the corresponding quinine salt. In both cases the mistake was due to the fact that the cardinal rule of prescription-compounding was violated,—the dispenser having his mind distracted by conversation, instead of keeping his whole attention upon his work. The check-system of our best pharmacies, by which a second clerk compares the articles used with the prescription, would have prevented the mistake in both instances, and saved three lives and much suffering. While sympathizing with the druggist, whose remorse made him attempt suicide, we can find no excuse for an accident which could not have occurred had ordinary care been exercised.

The coloring of morphine salts, so as to distinguish them from the cinchona alkaloids, has been proposed, and might prove to be of some advantage; but in careless hands all precautions will occasionally fail.

Poisoning by Petroleum.—In the *Gazette des Hôpitaux* for June 16, Dr. Duguet, of the Lariboisière, relates the case of a woman, aged 48, who was brought into that hospital May 8, having just swallowed about a pint of the ordinary petroleum of commerce, with suicidal intentions. She at once felt a strong sensation of oppression along the œsophagus, and especially at the stomach, together with a sense of burning, and was in a very agitated condition. She exhaled a powerful odor of petroleum, and on vomiting being excited by ipecacuanha, with large quantities of milk, a good deal of petroleum floated on the ejections, as it did in those produced from

the bowels by a clyster. All the urine of the patient was carefully preserved, and that passed just before the emetic was given contained a floating layer of petroleum two or three centimetres in thickness. On the next day after her admission the floating petroleum in the urine amounted to twenty-one cubic centimetres, but by the next day had diminished to five centimetres, and then gradually disappeared. Some albumen, which at first was present, disappeared with the petroleum. During the first four days the petroleum enabled the urine to be preserved without undergoing decomposition for ten days. No other feature of interest is recorded. —*London Medical Times.*

LONG ISLAND HOSPITAL COLLEGE.—The announcement of the twenty-seventh annual session, just issued, contains a notice of a prospective change of term, by which the College next year will more fully harmonize its course with those of other American colleges. The term of lectures (otherwise called the Regular term) shall begin in the first week of October of the year 1886, and continue five calendar months, and the term of reading and recitation (otherwise called the Preliminary term) shall begin at the close of the term of lectures (in the spring of 1887), and continue three calendar months.

THE Committee on Arrangements for the International Congress met in New York Sept. 3.

THE MISSISSIPPI VALLEY MEDICAL SOCIETY will meet at Evansville, Indiana, September 8, 9, and 10. The railroads will return those in attendance at one-third fare. Hotel rates, $1.50 and $2. For further particulars, address

DR. A. M. OWEN,
Evansville, Indiana.

DANIEL'S (TEXAS) MEDICAL JOURNAL, in its first issue, appeared last month with fifty-seven pages of reading-matter, bound in a sanguinary cover embellished with a star. Editor and Publisher, H. E. Daniel, M.D., Austin, Texas.

NOTES AND QUERIES.

A STRANGE ACCIDENT.

MR. EDITOR,—Strange things happen every day, but none more strange than the incident I give below. It is the case of a boy raped by a large bull-dog.

Benny W., white, aged 10 years, had gone with his elder brother to a neighbor's to gather apples. His brother, having filled his basket, returned to their home. In his absence, little Benny wished to attend to a call of nature. Unbuttoning his pants, they slipped down on his ankles. While in the act of stool the dog mounted him. He could not extricate himself, as his feet were bound and the dog's fore-legs on either side of his body.

When found, he was unconscious, bleeding freely, and the dog still at his work of violence, and unwilling to refrain. For some inches around the patient's anus the tissues were greatly contused and swollen. He improved rapidly, and is now out. The dog was killed.

This is a unique case, but should be a lesson to parents, especially those in charge of female children.

BARTER BROOK, VIRGINIA.

AMMONIA AND ALCOHOL IN SNAKE-BITE.

MR. EDITOR,—In the *Medical Times* of August 22 I notice an article on snake-bite by Dr. B. H. Smith. Living in a mountainous country for the last six years, I have been called on to treat a number of cases of snake-bite. Both rattlesnakes and copperhead-snakes are numerous here. I always resort to the use of whiskey as my sheet-anchor. Sometimes it is ten or twelve hours before I see the patient after the injury.

Two weeks ago I was called on to see a child, aged 10, female. She was bitten by a copperhead on the foot, about one inch above the middle toes. I saw her in four hours from the time she was bitten. Her symptoms then were: extreme prostration, with nausea; respiration very slow; pulse weak; eyes fully dilated, with a wild look. The foot and leg were very much swollen and purple, and very painful.

I gave her sixty minims of spts. ammon. aromat. hypodermically, ordered one ounce of whiskey every two hours, and a large poultice of bruised raw onions to be applied to the foot and to be renewed every hour. The whiskey and onions was kept up until the child was well, which was on the third day.

The above has been my treatment for the last six years, and I have never lost a case; nor have I heard of a death from snake-bite where the treatment has been carried out.

J. B. SHAW, M.D.

DELAWARE WATER-GAP, PENNSYLVANIA,
August, 1885.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 16, 1885, *TO AUGUST* 29, 1885.

WOLVERTON, W D., MAJOR AND SURGEON.—Granted leave of absence for twenty days. (Washington Barracks, District of Columbia.) S. O. 171, Department of the East, August 14, 1885.

CRONKHITE, H. M., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty at Fort Reno, Indian Territory, and assigned to duty as post-surgeon, Fort Hays, Kansas. S. O. 129, Department of the Missouri, August 26, 1885.

MAUS, L. M., CAPTAIN AND ASSISTANT-SURGEON.—In addition to his other duties, assigned to duty as attending surgeon of the Department Rifle-Camp. S. O. 83, Department of Dakota, August 3, 1885.

POWELL, J. L., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from temporary duty at Fort Leavenworth, Kansas, and assigned to duty as post-surgeon at Fort Lyon, Colorado. S. O. 128, Department of the Missouri, August 25, 1885.

KANE, JOHN J., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect when his services can be spared. S. O. 195, A. G. O., August 26, 1885.

EBERT, R. G., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty with United States troops at Riverside Park, New York. S. O. 179, Department of the East, August 24, 1885.

STEPHENSON, WILLIAM, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect September 1, 1885. (Fort Niobrara, Nebraska.) S. O.–79, Department of the Platte, August 20, 1885.

BLACK, C. S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Upon return of Troops F and L, Third Cavalry, to Fort Davis, Texas, to rejoin his proper station, Fort Clark, Texas. S. O. 98, Department of Texas, August 13, 1885.

MCCAW, W. D., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Assigned to temporary duty at the camp of the troops near Kiowa, Kansas. S. O. 128, Department of the Missouri, August 25, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM AUGUST 16, 1885, *TO AUGUST* 29, 1885.

DRENNAN, M. C., SURGEON; SIMON, WILLIAM J., SURGEON.—To temporary duty at Annapolis, Maryland, as members of board for physical examination of candidates for admission to United States Naval Academy.

JONES, WILLIAM H., SURGEON.—Detached from the "Wachusett," and waiting orders.

PHILADELPHIA, SEPTEMBER 19, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON ACUTE INFLAMMATORY RHEUMATISM.

Delivered at the Hospital of the University of Pennsylvania

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of, and Professor of the Theory and Practice of Medicine and of Clinical Medicine in, the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—This young woman, 27 years old, married, came to us three weeks ago, giving the following history. Her mother died of some hepatic trouble at the age of fifty. Her father died at the age of thirty-seven, of phthisis. She has had two brothers, one of whom died of heart-disease, while the other is in good health. She has six sisters, one of whom has had rheumatism, and another is supposed to have some cardiac trouble, but we do not know that it is organic. This woman had scarlet fever when a girl, and has had attacks of quinsy, and for some years has been troubled from time to time with attacks of palpitation of the heart. Four years ago she had a severe attack of rheumatism, and three months ago she had a second attack. Two weeks before she came to the hospital the joints again became inflamed, and there was considerable fever. The inflammation attacked several joints, and shifted from one to another. When she came here the fever had almost entirely subsided, and since then she has been almost absolutely apyretic. Despite this, there has been great pain and tenderness in the right elbow and shoulder and in both knees and ankles. The joints were painful on motion and tender on pressure. There was also redness and swelling of the affected parts. The day after admission, the middle finger of the left hand suddenly became swollen, and other joints of the fingers became involved. Since then she has been steadily improving, and now is entirely convalescent. There is no fever; she has a good appetite; the digestion is fair; and the joints have gradually yielded to treatment. This has been an attack of rheumatism in a young woman whose family history points to a rheumatic diathesis.

I now wish to examine the heart by auscultation. There is a soft systolic murmur heard over the apex. It is very slight, and is not carried into the pulmonary artery. This murmur is then probably dependent on slight thickening of the edges of the mitral valve, preventing perfect closure of the leaflets, so that there is slight regurgitation. I attribute the murmur to this cause rather than to anæmia, for the reason that the patient is not very anæmic, and this systolic murmur is not carried into the pulmonary artery, as anæmic murmurs are apt to be continued. Anæmic murmurs are usually not strongest at the very apex, but over the body of the heart, and they are propagated upwards in the line of the great vessels. This murmur has its point of greatest intensity at the apex and is not heard in the upward direction, so that, from the absence of evidences of anæmia and from the character of the murmur, I am disposed to attribute it to slight organic change rather than to alteration in the blood.

This case in its history illustrates some interesting points about rheumatism. Rheumatism is said to be a diathetic disease, and by that is meant that it is a disease which occurs in certain persons rather than in others, and that these persons exhibit a tendency to it; but it is difficult to define what this tendency is. The attempt has been made to describe a certain physique as associated with the rheumatic diathesis, but I cannot say that this accords with clinical experience. Persons presenting all kinds of physical types may possess the rheumatic diathesis, but it is a peculiarity in the individuals which makes them liable to develop within their systems some irritative chemical substance, as a result of faulty digestion or assimilation. This affection illustrates a point to which I have frequently called attention, and that is the tendency to the internal or endogenous production of morbid principles which give rise to pathological states called symptoms. Rheumatism gives us perhaps the most typical illustration of this kind of affection. In this disease it seems to be an acid, and by some it is supposed to be lactic acid; but I have no

idea that it is exactly lactic acid. It is probably some complex, organic, acid substance which has not been and may never be thoroughly isolated. We judge that it is an acid because there appears to be an excess of acid in the system at the time of the attack. The urine is intensely acid, and there is a disposition to copious sweats, which are extremely sour: so that in every way it appears that the blood and juices of the tissues are saturated with some acid material.

Rheumatism occurs as an acute affection, and we give it the name of rheumatic fever, or acute inflammatory rheumatism. It may begin with a rigor, but more frequently there is simply a rise in temperature and the occurrence of pain in the affected joints. These joints become red and swollen, and are exceedingly tender and painful on motion. The affection may be limited to one joint, or it may involve a number. More commonly, the large joints, as the elbow, the knee, the wrist, the hip, and the shoulder, are affected, and there may be also some affection of the smaller joints, as those of the hands and feet. The temperature may rise to 102° or 103°. It presents slight variation during the day, but usually increases towards evening. Although there is fever, the skin is rarely dry; but, as I have stated, there may be profuse sweats. These are usually acid, and have a strong sour smell. The urine presents, in an intense degree, the characteristics of the febrile state. It is concentrated, and this is partly due to the drain of water by the profuse perspirations. It is very high-colored and strongly acid. This high color is not alone the result of the great concentration of the urine, but there is also an excretion of coloring-matter. This is associated with a rapid breaking down of the blood-globules, so that rheumatism is one of the acute affections which most rapidly produce anæmia. The tongue is coated, there is rarely much appetite, and there is usually great thirst, particularly for sub-acid drinks, such as lemonade, tamarind-water, and the like. As a rule, the bowels are torpid.

Rheumatism runs an exceedingly irregular course. We may say that, if left to itself, it generally lasts from four to six weeks; but, fortunately, we can control it to a certain extent by treatment.

One great peculiarity of this affection, and characteristic of it, is the behavior of the joints. The inflammation shifts from one to another, sometimes quite rapidly. To-day the elbow and wrist of the left side may be violently inflamed, and to-morrow the inflammation may have shifted to the right knee and ankle, while the previously-affected joints can be freely handled, although the redness and swelling may not have entirely disappeared. There is this marked tendency to involve joints successively. After it has left a joint, it may return: so that each joint may be inflamed several times. This, of course, prolongs the attack, and renders its course peculiarly trying and uncertain.

There are certain other peculiarities to which I must ask attention. Not only is there this tendency to recurrence during the attack, but rheumatism is one of those diseases in which one attack seems to render the system more liable to the disease, and recurring attacks are very common. This woman is now in her fourth attack.

Rheumatism is very liable to affect internal parts, particularly the serous membranes of the heart. Hence it is that the most serious complication that we dread in rheumatism — and the complication which gives to the disease much of its gravity—is endocarditis and pericarditis, particularly the former. Of all the causes of acute endocarditis, rheumatism stands by far the first.

Among other risks connected with rheumatism, I would mention the danger of hyperpyrexia. The origin of this is somewhat obscure. It evidently is not dependent, at least in most cases, upon the development of actual intracranial inflammation. It is probably due to a sudden failure of the heat controlling centre, which, when exhausted, allows the development of an immense amount of caloric. Suddenly, when the patient is apparently doing well, the fever will begin to rise until a high temperature is reached. This is attended with severe cerebral symptoms, and may end in coma and death.

This disease, then,—so frequent in those who have the diathesis, so apt to recur, so uncertain and tedious in its course, attended with such serious danger of organic disease, such danger of hyperpyrexia and

alarming nervous symptoms, and, finally, so apt to run into a chronic form,—is a disease deserving of our most careful study, particularly in regard to its management.

The symptomatology of rheumatism renders its diagnosis very easy. It is only when rheumatic fever exists without arthritis that there is much difficulty in diagnosis. This occurs not rarely, especially in children. Cases where little children get fever and are evidently sick, and where no organic lesion is found, and there is no pneumonia, bronchitis, nor eruptive fever, are often cases of rheumatic fever without distinct inflammation of the joints. Such children dislike to move, and cry if much handled, and this would put one upon the track. In such cases, where there is no inflammation of the joints, there is often a greater tendency to inflammation of the membranes of the heart. I am constantly told, in cases of organic cardiac disease in young children, that the child has never had rheumatism. The origin of this cardiac trouble had been overlooked, because in the rheumatic attack the inflammation had been purely internal. This is another illustration of that important clinical rule regarding children, that we should never fail to make a thorough physical exploration in every case. So, too, I meet with rare cases of rheumatic fever in children and adults, particularly the latter, where the joints are not much affected, but where the nerve-sheaths, the membranes of the cord, and the membranes of the brain even, are the seat of the rheumatic inflammation.

The prognosis of rheumatism is exceedingly difficult; in fact, I do not know any disease in which you will be more constantly misled if you attempt to establish a positive prognosis. Even after a case has appeared to do well for some time, it may suddenly relapse. A change of weather may cause such a relapse.

There are some things connected with prognosis to which I should refer. Where the patient has had a previous obstinate attack, the prognosis in the individual attack is of course worse. In a first attack the prognosis is, to a certain extent, influenced by the violence of the inflammation of the joints and the height of the fever; yet the disease often proves more tedious where only one joint is affected than where a number are involved. The most favorable case is one in which a reasonable number of joints are simultaneously and moderately affected, and the inflammation remains quiet in these places.

In reference to the heart-complication, we usually have no guide for prognosis. It generally can be avoided by suitable care and treatment. In proportion as the diathesis is strong is the danger of cardiac complication greater. Where the heart has once been affected there is greater danger of its involvement in subsequent attacks.

We should always have before our minds the danger of hyperpyrexia. The cases in which I have seen this have certainly been associated with a marked tendency to nervous exhaustion, either from the prolonged course of the disease with considerable febrile action, or, as in the last two cases coming under my observation, from worry, anxiety, and depression of spirits preceding the attack of rheumatism. In the attack of rheumatism which subsequently occurred there was evident giving way of the heat-controlling power of the nervous centres and the development of intense hyperpyrexia; in one case controlled by prompt treatment, but the other proved fatal.

Now as to the treatment. In the first place, there is no disease in which cold, draughts, dampness, and changes of temperature require closer watching. The patient should be carefully put to bed and use the urinal and bed-pan from the beginning of the attack. He should be enveloped in light merino or flannel gowns, and, if the weather is severe, should be put to bed between blankets. I find that many of these patients wear light flannel night-caps to guard against the possibility of chilling the surface; but, on the other hand, the head becomes bathed with sweat, and if the temperature of the room changes they may become chilled in that way.

The food should be light and nutritious. I do not think that we can lay down any fixed rules for the diet of rheumatics. The cereal, farinaceous preparations, as gruel and porridge, with milk and broths, would indicate the diet to be aimed at. Heavy, greasy articles, meats and sweets, should be avoided. In some cases the

anorexia is so great that only liquids can be taken. We should, however, be careful to remember that this is a disease tending to exhaustion, and that the patient's strength must be maintained, and therefore a low diet is rarely judicious.

In regard to remedies. If the tongue is heavily coated, urine very dark, bowels constipated, and anorexia or even nausea present, we should give a short course of calomel and soda. This should be continued for a couple of days, until the bowels have been moved once or twice. If this is not called for, the patient should at once be put on full doses of salicylic acid or salicylate of sodium. Ten grains every three hours during the day and night would represent about the average quantity (sixty to ninety grains in the twenty-four hours). If the fever were high and the symptoms violent, we should give twelve or fifteen grains every three hours. This treatment should be continued three or four days, and if it is to do good, it will do it in that time. Some cases will not yield to it, but in many instances it acts like a charm, and the value of this remedy in acute inflammatory rheumatism is positively established. It is not a specific and not universally valuable, but it does relieve a considerable proportion of cases far more rapidly than any other drug. If, before its administration, we place the digestive tract in a good condition, the proportion of cases in which it does good will be further increased. In the present case salicylic acid acted very nicely. The drug rarely does any harm. If it should irritate the stomach, it must be stopped.

If the salicylate has been given for several days and the fever does not subside, the pain does not pass away, and the joint-inflammation is not improved, we should stop it; for, if continued, it is more apt to irritate the stomach and depress the patient than do other alkalies, and under these circumstances it is only doing the work of an alkali. We should then change to the bicarbonate or acetate of potassium, giving these in such doses and with such frequency as are indicated by the condition of the urine and the state of the stomach. Five grains of the bicarbonate with ten grains of the acetate of potassium may be given in water every three hours, and continued until the urine is more copious, lighter colored, and neutral. If a reasonable course of this treatment, continued for a week or ten days, does not cause a subsidence of the rheumatic symptoms, I abandon specific treatment and direct attention to the condition of the patient, giving quinine, strychnine, nitro-hydrochloric acid, and pepsin, to render primary assimilation as vigorous and perfect as possible. If we know anything about rheumatism, we know that it is connected with weakening of the power of assimilation. There is produced some irritative matter which, entering the system, produces these symptoms. If the derangement is so serious that the remedies I have recommended do not enable the system to react and throw off the disease, I abandon them and administer nerve and digestive tonics to improve the condition of primary assimilation. I have secured excellent results by this change of treatment in cases where, week after week, the salicylic acid and alkaline treatments have been pursued without positive benefit.

During this treatment the patient must be relieved of pain and enabled to sleep. Opium is the only drug which positively effects this. It is to be given in such doses as the state of the stomach and the intensity of the pain indicate. Very often a small hypodermic of morphia gives a longer and more complete relief from pain than opium by the mouth. Suppositories of opium may be used with advantage, as they do not injure the stomach. In many cases ten grains of Dover's powder will exert a relaxing, tranquillizing, and sedative effect which is exceedingly happy. If the case proves at all obstinate, we should never use the hypodermic injections, from the dread that the patient may become addicted to their employment. I never resort to hypodermic medication for the relief of pain except in the crises of acute disease, and I disguise the form of opium so that the patient may not be able to trace the relief of pain to any special drug. Subacute rheumatism is one of the affections which I have known frequently to lead to the opium habit.

We now come to local treatment. Of late years I have always begun the treatment of rheumatism with the application of a blister to the præcordia, allowing it to remain seven hours, following it with a poultice, and dressing with a simple unguent. I do this, in the first place, as a

preventive measure; and, secondly, I think that I have noticed that it modified the general symptoms. I think that I have seen amelioration of the symptoms follow the application of a blister to the præcordia, even where there was no recognizable affection of the heart. I also apply small blisters, one inch by a half inch, over the affected joints, applying them to the different joints in succession. I also apply chloroform-liniment, and cover the part with oiled silk. If I do not use blisters, I rub an ointment of veratrine and iodide of mercury over the inflamed joint. The ointment may consist of thirty grains of veratrine and forty grains of the proto-iodide of mercury to the ounce of cosmoline.

If endocarditis appears in the course of rheumatism, I abandon whatever treatment I may be employing and again apply a blister to the præcordia if that is not still sore. Internally I administer calomel, opium, and digitalis. When I have given as much calomel as I think proper, I substitute iodide of potassium and digitalis. The relief of the cardiac inflammation and the preservation of the integrity of the heart are of vastly greater consequence than the mere control of the joint-trouble; in fact, the patient has to remain quiet so long, until the heart has entirely recovered, that it makes little difference whether or not the joint remains inflamed a few weeks longer.

Lastly, when hyperpyrexia appears, I have found nothing sufficient to arrest it but the external use of cold water. The hyperpyrexia of rheumatism is more sudden in its onset and attended with greater cerebral symptoms than any other form that I know of save that which occurs in sunstroke and malignant scarlet fever. I have seen the temperature jump from 103° in the morning to 107.5° at night, attended with frightful maniacal delirium alternating with a tendency to coma. When the temperature begins to rise to 104° or 105° we should use full doses of quinine, or of salicylic acid, or of antipyrine, giving the remedy at short intervals and having a trained nurse or a physician to watch the effect. If this checks the rise, good; but if the temperature continues to go up, or if cerebral symptoms appear, then, whether or not there is violent inflammation of the joints, or even pericarditis or endocarditis, the patient must, without delay, be put in a cold bath. I have taken such patients from the bed, put them in the bath-tub and held them there, rubbing them with blocks of ice until they were cool, and have had their symptoms pass away while there, then carried them back to bed. The next day I have found them perfectly well, and even the inflammation of the joints gone. I have never seen any injurious results from this treatment, while I have seen life saved by it in at least five cases. I think, however, that by careful proper feeding, attentive nursing, and judicious treatment, hyperpyrexia can usually be avoided; but it may develop in cases such as I have mentioned, and, when it does, you must be prepared to meet it promptly.

ORIGINAL COMMUNICATIONS.

COCA-LEAF CIGARS AND CIGARETTES.

BY F. E. STEWART, M.D., PH.G.

I HAVE been experimenting for some time with the leaf of Erythroxylon Coca in the form of a cigar,—first, for the purpose of ascertaining whether the drug would thus produce its physiological effects, and, secondly, in view of a new therapeutic application. It is too soon yet to express a positive opinion in regard to the latter, but I have had sufficient experience with them to say something about the former; and as I find that others are already commencing to enter this field, I may be excused for calling the attention of the profession at this early date, my excuse being that I wish to receive what credit may accrue from my share in their introduction.

Some time after I commenced my experiments I found that Dr. Lewis Lewis, of this city, was employing coca in the form of a cigarette in the treatment of throat-affections with success, and, as he says that he has been using the drug in this way for nine years, he is entitled certainly to the credit of priority.

Dr. Lewis's cigarettes are composed partly of coca- and partly of tobacco-leaf. This has its advantages and disadvantages. Without discussing this point, however, I employed a cigar made of pure coca-leaf, with a wrapper of mild imported tobacco of fine quality, and a cigarette of pure

coca-leaf containing no tobacco, wrapped with the best quality of rice-paper. Those who do not object to the tobacco can use the cigars, while those who have objections to it can employ the cigarette; while for those who object to the tobacco wrapper and the paper wrapper also I prepare a "smoking tobacco" of pure coca-leaf, without admixture of any kind, which may be smoked in a pipe.

Coca is too well known to the profession to make it necessary for anything more than the briefest description of the plant, its history, or its virtues.

The Erythroxylon Coca grows in moist and woody regions on the eastern slope of the Andes, from two thousand to ten thousand feet above the level of the sea, and is highly valued and cultivated by the natives of Peru, Chili, and Bolivia, who make great use of it as a medicine and as an article of diet. It answers as a substitute for the tea, coffee, tobacco, hashish, opium, etc., of other nations. The natives masticate the dried leaves with finely-powdered chalk, or with a highly alkaline substance prepared from roasted potatoes and the ashes of various plants, and which they call *llipta*. It is said that its use enables them to endure fatigue and exertion for many hours, and even for several days, with but little nourishment of any other kind, and while under its influence they are said to perform prodigies of labor.

Let me compare, therefore, the action of these cigars with that said to be produced by the drug not only by the natives, but by Bartholow, Wood, the United States Dispensatory, the National Dispensatory, and other authorities equally well known, who are investigating the properties of this remarkable drug.

First, all authorities agree that the use of coca, either in the leaf, fluid extract, or wine, is followed by a feeling of contentment and of well-being, the sense of fatigue is removed, drowsiness is experienced for a brief period, but is soon followed by wakefulness and increased mental activity. The celebrated pedestrian Weston, having learned their powers, was detected in the use of coca-leaves during one of his extraordinary feats in London. The question, then, is, does coca, smoked, produce these effects?

I have testimony as to the feeling of contentment and well-being. Dr. M., of Wilmington, Delaware, one of the leading physicians of that State, made some experiments in this direction for me. Being thoroughly acquainted with the effect of the drug, having frequently used it in connection with his extensive practice, and often experienced its effect on himself, what he has to say must be received as of weight. At the time of the experiment which was tried upon himself he was feeling somewhat depressed,—had the blues, in other words,—owing to the absence of his family and the loneliness of his house without them. After dinner he smoked a couple of the cigars, with the effect that the "blues" were expelled and he felt the exhilarating effect of the drug in the same manner as after a dose of the wine. It is his opinion that the effect of the cigars is milder than that of the wine, but he is satisfied that he experienced the peculiar power of the coca by smoking it. He will continue his experiments in other cases.

Mr. S., of the same city, who was suffering from a dyspepsia and its attending depression, smoked the cigars after meals at my suggestion, the result being to dispel the depressed feeling and remove the fulness experienced after eating a meal. Repeated experiments confirmed this. As coca is said to stimulate the gastric nerves and greatly facilitate digestion, the above experience seems to prove that the cigar has a similar effect.

Mr. C., a clerk in a cigar-manufactory, Philadelphia, smoked several of the cigars. He says that the first one was used during the hot weather of summer, when he was nervous and depressed by the heat. The effect was to stimulate him, remove the depression, and steady his nerves, and he felt well afterwards for the rest of the day. Repeated experiment confirms him in the belief as to the correctness of his view that coca-leaf smoked is a stimulant and tonic. He inhaled the smoke.

Dr. K., Philadelphia, has smoked a number of the cigars at my request. He is familiar with the effect of coca, having used it while a student as a stimulant during his researches on the heart at the physiological laboratory of the Jefferson Medical College. He recognizes the stimulating effect of the drug in the cigar.

Mr. M., Philadelphia, a chemist of much reputation, and a very careful observer, finds a stimulating effect from the cigar the same as his experience in the use of coca. He will continue to experiment with it.

Prof. S., for many years a teacher of pharmacy in Philadelphia, a gentleman of excellent powers of observation, says that he experiences the peculiar effect of coca on smoking the cigar.

Chief Engineer N., U.S.N., a member of a

recent Arctic exploring expedition, says that he did not experience any exhilaration from the smoke of the coca-leaf. He will, however, continue his experiments still further, and report to me after doing so.

Personally, I have found the effect of smoking coca-leaves to bear out the statements that the drug produces a general excitation of the circulatory and nervous systems. Smoking and inhaling the smoke of one or two cigars will increase my own pulse-rate some eight or ten beats to the minute. It certainly relieves the sense of fatigue. Smoked at night, in my own case and in the cases of several of my patients, it produces wakefulness similar to strong coffee.

The exaltation produced by it does not seem to be followed by any feeling of languor or depression. I find it a relief after a full meal, like a good tobacco cigar. It seems to impart increased vigor to the muscular system as well as to the intellect, with an indescribable feeling of satisfaction. I have never experienced any intoxicating effect from smoking it. Dr. Bartholow says that coca, as is the case with tea and coffee, acts as an indirect nutrient by checking waste, and hence a less amount of food is found necessary to maintain the bodily functions; and it is probable that some of the constituents of coca are utilized in the economy as food, and that the retardation of tissue-waste is not the sole reason why work may be done by the same person better with than without it; and I have just learned, in a letter from Messrs. Parke, Davis & Co., that "a Mr. Stevers, a citizen of Abilene, Kansas, who is afflicted with hay-fever, and was about to go to the mountains, has concluded to remain at home, having obtained relief from the use of cigarettes of coca. Every morning he uses a cigarette, and finds perfect relief. He uses three per day, and also has used an application of two-per-cent. solution of muriate, but finds that the cigarettes relieve him quicker and the effects last longer."

To sum up, therefore, coca smoked seems to produce the same effect on the system as coca taken internally in the form of fluid extract, wine, or elixir, but not in such a marked degree. Coca itself is known to be stimulant, tonic, and restorative to the system in the treatment of various diseases marked by debility and exhaustion. Nervous debility and exhaustion in all its forms, whether caused by diseases or excesses, are said to be relieved by it. Fatigue disappears, to be followed by a feeling of indescribable calm and satisfaction, increased strength of brain and muscle, and desire for mental and muscular occupation.

Coca has been used with great success in the treatment of the opium habit. It is also an excellent substitute for tobacco. It has been successfully used in dyspepsia, flatulency, colic, gastralgia, enteralgia, hysteria, hypochondria, spinal irritation, idiopathic convulsions, nervous erethism, and in the debility following severe acute affections. As it is a valuable restorative agent, checking tissue-waste, it is a useful remedy in consumption and wasting diseases generally. It is also of value in the nervous forms of sick-headache, *migraine*. It is said to be an aphrodisiac.

Now, my object in publishing this article is to introduce coca-leaf cigars to the notice of the profession. I have furnished what information I have to prove the cigars are capable of producing the action of the drug. In my own mind I have no doubts on the subject, though the effects are milder than those resulting from the employment of the fluid preparations of coca internally. I have also summed up the properties said to be possessed by coca as a therapeutic agent. I have produced evidence, in addition to that furnished by Dr. Lewis, that it is of value in the treatment of hay-fever; and, as it is important that the true value of this form of using coca-leaf should be known, I have had some made, and I will send samples to members of the profession, free of charge, who may desire to test them, and will publish the results, favorable or otherwise, in the medical press. I have no proprietary interest in them, nor have I copyrighted this article concerning them. The idea of coca in this form, and all information concerning it, is free to the use of the profession.

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Potassium Bromide in Ovarian Menorrhagia.—Dr. Alfred Meadows, referring to the powerful influence exercised by this agent upon the ovaries, stated that no drug equalled it in controlling ovarian menorrhagia: it not only limits the flow, but also exercises a distinct and controlling influence upon ovulation itself, decreasing its frequency.—*Proc. British Gynæcol. Society.*

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

DERMATITIS HERPETIFORMIS.

UNDER this title Duhring describes a skin-disease which includes the affections known as herpes gestationis (Bulkley), herpes impetiginiformis and impetigo herpetiformis (Hebra), and also as herpes pruriginosus, pemphigus, eczema, etc.

The affection is protean in its objective symptoms, taking on various forms in one case or in another, and varying in the characteristic lesions at different times even in the same case.

In severe cases prodromata are usually present for several days preceding the cutaneous outbreak, consisting of malaise, constipation, febrile disturbance, chilliness, heat, or alternate hot and cold sensations. Itching is also generally present for several days before any sign of effervescence. Even in mild cases slight systemic disorder may precede or exist with the outbreak. This latter may be gradual or sudden in its advent and development. Not infrequently it is sudden, one or another manifestation breaking out over the greater part of the general surface diffusely or in patches in the course of a few days, accompanied by severe itching or burning.

A single variety, as, for example, the erythematous or the vesicular, may appear, or several forms of lesion may exist simultaneously, constituting what may very properly be designated the multiform variety. The tendency is in almost every instance observed by Duhring to multiformity. There is, moreover, in almost every case a distinct disposition for one variety sooner or later to pass into some other variety: thus, for the vesicular or pustular to become bullous, or *vice versâ*. This change of type may take place during the course of an attack or on the occasion of a relapse; or, as is often the case, it may not show itself until months or years afterwards. Not only multiformity of lesion but irregularity in the course of development is, it may be repeated, the rule. Itching, burning, or pricking sensations almost always exist. When the eruption is profuse they are intense, and cause the greatest suffering. They become more violent before and with each outbreak, abating in a measure only with the laceration or rupture of the lesions. The disease is rare, but of more frequent occurrence than formerly supposed. Duhring has met with fifteen cases. All were adults, including both sexes in about equal proportion. The natural history of the disease is interesting. The process is in almost all instances chronic, and is characterized by more or less distinctly marked exacerbations or relapses, occurring at intervals of weeks or months. The disposition to appear in successive crops, sometimes slight, at other times severe, is peculiar. Relapses are the rule, the disease in most cases extending over years, pursuing an obstinate, emphatically chronic course. All regions are liable to invasion, including both flexor and extensor surfaces, the face and scalp, elbows and knees, and palms and soles. Excoriations and pigmentation, diffuse and in localized areas, are in old cases always at hand in a marked degree. The pigmentation is usually of a mottled dirty-yellowish or brownish hue, and is persistent.

The remainder of Duhring's paper is devoted to a more detailed description of the various types of the disease,—the erythematous, the vesicular, the bullous, the pustular, the papular, and the multiform.

Since the publication of this first paper Duhring has thrown off a perfect fusillade of articles describing cases illustrating the various types of the affection and its relations to other diseases of a similar nature.*

Under the title *Hydroa, Impetigo Herpetiformis, Dermatitis Herpetiformis*, Robinson (*Jour. of Cutaneous and Venereal Diseases*, January, 1885) discusses the propriety of Duhring's nomenclature, and gives a case occurring in his own practice,

* 1. Notes of a case of dermatitis herpetiformis, extending over eleven years, illustrating the several varieties of the disease (Philadelphia Med. Times, July 12, 1884). 2. Case of dermatitis herpetiformis (multiformis), aggravated by pregnancy and irregular menstruation (Philadelphia Med. News, July 19, 1884). 3. A case of dermatitis herpetiformis (bullosa) (New York Med. Jour., July 19, 1884). 4. Case of dermatitis herpetiformis, illustrating in particular the pustular variety (impetigo herpetiformis of Hebra) (Jour. Cutaneous and Venereal Diseases, vol. ii. No. 8, August, 1884). 5. Dermatitis herpetiformis: its relation to so-called impetigo herpetiformis (Am. Jour. Med. Sci., October, 1884). 6. Notes of a case of dermatitis herpetiformis during thirteen years (New York Med. Jour., Nov. 15, 1884). 7. Preliminary note on the relation of dermatitis herpetiformis to herpes gestationis and other similar forms of disease (Phila. Med. News, Nov. 22, 1884). 8. Case of dermatitis herpetiformis caused by nervous shock (Am. Jour. Med. Sci., Jan. 1885). 9. A case of dermatitis herpetiformis, with peculiar gelatinous lesions (Phila. Med. News, March 7, 1885). 10. Relation of herpes gestationis and certain other forms of disease to dermatitis herpetiformis (paper read at the ninth annual meeting of the American Dermatological Association, Aug. 27, 1885, not yet published).

illustrated by a chromo-lithograph. Robinson says that it has not by any means been shown that the term hydroa, as first proposed by Bazin for certain eruptions resembling on the one hand herpes and on the other pemphigus, is not, in its proper acceptance, sufficiently broad to include all those papular, vesicular, pustular, and bullous forms of eruption which have been described under the terms impetigo herpetiformis, dermatitis herpetiformis, pemphigus hystericus, and herpes gestationis. Dr. Robinson inclines to the views of the late Dr. Tilbury Fox, as given in a posthumous article on hydroa (*Archives of Dermatology*, 1880, p. 21), in which that writer distinguishes three varieties of the affection,—Hydroa simplex, H. herpetiforme, H. bulleux s. pruriginosum. These, however, do not seem to give room for cases in which the pustular element predominates. All or almost all of Duhring's cases were characterized by intense itching, and this whether they showed such symptoms as would include them under the subdivisions H. simplex, H. herpetiformis, or H. bulleux s. pruriginosum.

Brocq (*Annales de Dermatologie et de Syphilis*, i. vii., 1885, p. 235) considers the question in this country to be in considerable confusion. He quotes a case reported by Boardman (*Boston Med. and Surg. Jour.*, October 2, 1884, p. 821) of a woman of 26, in whom, six days after labor (which had been followed by hemorrhage, fetid lochia, and fever), a vesico-papular and pustular eruption, with more generalized erythema, appeared on the hips, thighs, lower part of the abdomen, and breasts. Later bullæ appeared, which broke, and sometimes displayed excoriations. Gradually the whole body, head, and limbs were covered, and the patient got very low, but rapid recovery took place at the end of three weeks.

Comparing this case with those of Duhring and Robinson, Brocq declares that he cannot see how they can be brought into a single category. Robinson's case seems to him one of ordinary erythema multiforme bullosum. Boardman's case seems one of dermatitis, a bullar and erythematous eruption caused by septicæmia or the effect of medicine, and therefore similar to Hebra's impetigo herpetiformis. Besnier and Doyon have pointed out that these eruptions (of impetigo herpetiformis) are septicæmic in character, or else reflex dermatitides of a trophic character. In the present state of our knowledge it might perhaps be well to class them in a new group of infectious erythema multiforme. They have the extreme gravity, the rapid development, the multiform general and local symptoms, and, finally, the cutaneous manifestations.

On the other hand, Brocq points out that the cases reported by Duhring are of slow evolution, chronic, characterized by successive onsets persisting for years without marked modification, appearing without perceptible cause in persons otherwise healthy, and finally having nothing more in common with Hebra and Kaposi's cases than certain external appearances. The impetigo herpetiformis of Hebra and Kaposi has always been observed in pregnant women; the dermatitis herpetiformis of Duhring, so far from being more marked, diminishes during gestation. Brocq, in conclusion, expresses doubt as to the existence of dermatitis herpetiformis as an entity.

In the opinion of the writer of these reports, the whole subject needs more careful observation and multiplied data before a positive settlement can be arrived at. The international discussion of the question should be continued, and all in possession of facts should bring them forward for comparison and deduction.

SKIN-DISEASES OF THE LOWER EXTREMITIES RESULTING FROM ULCERATION.

Unna (*Med. Press*, April 15, 1885, from *Deutsch. Med. Zeitung*) includes under this head simple pruritus, various forms of eczema, œdema, and pachydermy, superficial phlebectasiæ, hemorrhage, and lastly ulcer of the leg. In all these blood-stasis is the primary symptom and the principal cause of the succeeding phenomena. The indications for treatment are: 1, To remedy the symptoms of impeded circulation; 2, To ascertain and apply the local treatment demanded by the existing condition of things. Under the first head Unna rejects the treatment by horizontal posture with elevation of the limb, because so soon as the foot is placed upon the ground again, stasis once more comes into play. Bandages properly applied are of high value. The ordinary bandages are only useful in mild cases. Martin's rubber bandage is very valuable, but the weak point of the material lies in its impermea-

bility. It answers well when but little moisture is given off; but in those cases where there is abundant transudation, where eczema or discharging ulcers are present, the india-rubber bandage is not only of no use, but almost invariably sets up a frightful eczema which at once demands a change of treatment.

Instead of Martin's bandage, Unna now uses the following procedure. Take, for instance, a neglected case of varicose veins partly covered by moist and partly by dry eczema, on the under anterior third of which is a dirty necrotic undermined mass surrounded by a soft loose border. After a thorough cleansing with soap and water, he paints the whole over as far as the ulcer with warmed zinc paste (℞ zinc. oxid., gelatin. pur., āā 10; glycerin., aquæ, āā 40. To be painted on warm). Upon the ulcer itself iodoform is dusted, and a layer of lint placed which may also be saturated with iodoform or sublimate. He then takes an ordinary roller, such as is used in bandaging with plaster of Paris, and rolls this up *from each end so that it has at last two heads of equal size.* Thus rolled up it is dipped into water, squeezed out, and then applied in the following manner to the leg covered with paste and not yet quite dry. The patient sits with his leg raised opposite the surgeon, who grasps with his two hands the two heads of this bandage so that the connecting piece between the two heads comes into contact with the limb behind and opposite the ulcer. The two heads are then brought forward and covered over the ulcer, already covered with the lint or gauze. The heads of the bandage are then made to change hands, and firm tension is made, so that the leg at the level of the ulcer is plainly diminished in circumference. The two heads are then carried backwards and crossed either above or below, but under all circumstances opposite to the ulcer. The heads again change hands and are carried forward, crossed in another place and tightened, and so on until the whole of the affected part is covered by the bandage. A second moistened prepared bandage is then immediately placed over the first, for the purpose of filling up the thin places of the first and strengthening it. The second may be put on in the same way as the first, but it is usually done in the ordinary way. The bandage soon dries, and it is allowed to remain on from two to four days, according to the amount of secretion going on under it. The pain on walking and putting the foot down soon becomes less, so that the patient's occupation is not interrupted. The more firmly the bandage is laid on, the better is the result seen on taking it off. It is therefore laid on as tightly as the patient can bear at the time. When the quantity of secretion diminishes, this "permanent bandage" may remain on eight days.

Every time the bandage is changed—it should be taken off while the leg is in a pan of warm water—an agreeable improvement in the ulcer is observed; at first cleansing of the bottom, then flattening down of the edges, then covering with healthy granulations and progressive diminution in size by advance of the border of epithelium. In the mean time the zinc paste, assisted by the restful pressure of the hardened pasty bandage, acts beneficially on the eczema, and astringently on the whole leg. The essentials are the peculiar manner of applying the bandage from both ends, and the preliminary application of the paste. This method of application leaves absolute permeability. It is important to cover the healthy skin with the paste, so as to get a firm basis of attachment for the bandage.

In addition, Unna gives concentrated fluid extract of hamamelis (P. D. & Co.) ♏xx thrice daily, and also uses other internal and external remedies, the names and qualities of which are as yet unknown on this side the Atlantic.

BILATERAL HERPES ZOSTER.

Dr. J. Magee Finny (*British Med. Jour.*, January, 1885) gives a case of this rare distribution of herpes occurring in a woman of 40. On the left side the patches of disease followed the distribution of the descending sensory nerves of the cervical plexus, with the exception of the supra-sternal division, and were limited to the upper part of the deltoid and pectoral muscles. A large patch occupied the posterior superior triangle of the neck, and one or two smaller ones were over the sterno-mastoid. The eruption on this side would correspond to Von Bärensprung's variety, *Z. cervico-subclavicularis.* On the right side the ascending branches of the second and third cervical nerves were those engaged (*nervus occipito-collaris*), and no patches were visible below the level of the thyroid body, though a large

cluster occupied the anterior triangle of the neck as far forward as that body, corresponding to the junction and cutaneous distribution of the superficialis colli and infra-maxillary branch of the facial nerve. Another patch was on the lower jaw, and a third was situated near the mastoid, over the origin of the plexus. The whole of the external ear was red and swollen, and thickly studded with very minute vesicles, the swelling extending a short way into the meatus auditorius. The scalp on the same side, and strictly limited to that side as far forward as the mid-parietal region, was the seat of a number of scattered pimples and vesicles.

The unusual features in this case were the occurrence of herpes of the scalp and the coexistence of the disease on different sides of the neck. Herpes zoster, as Dr. Finny remarks, has its predilections for certain parts. The favorite sites are in the course of the intercostal nerves and the lumbo-sacral plexus; next in order come the brachial plexus, the descending branches of the cervical, and the frontal or facial branches of the fifth nerve. Among the most rare are the occipital nerve and the nerves of the fore-arms and legs. The chief interest in Dr. Finny's case, however, is that the herpes attacked both sides at the same time. In the comparatively few cases on record of bilateral herpes zoster, the eruption as in the above case is not on exactly the same level, but the cutaneous nerves attacked on one side are on a higher or a lower level than those on the other side.

THE THERAPEUTICS OF SKIN-DISEASES.

Lupus Erythematosus.—Dr. Reynolds (*Florida Med. Monthly*) uses hot water and sapo viridis in the evening, followed by the application of sulphur ointment (one drachm to the ounce) over-night. For several days subsequently he applies a powder of boracic acid morning and evening. The smaller patches he removes by multiple puncture and the electric needle.

Pruritus Ani. — Atkinson (*Virginia Medical Monthly*) considers among the causes of this affection internal hemorrhoids, constipation, profuse diarrhœa, ascarides, chafing the anus and neighborhood, and too warm coverings at night. Tobacco, tea and coffee, and all articles of food which may give rise to dyspepsia, increase the evil. Scratching sometimes causes the formation of rhagades, which aggravates matters. By way of treatment, Atkinson recommends that when the patient wakes with itching about the anus, this being usually worse at night, he should rise and sit upon a cold surface or in a cold sitz-bath. Constipation must be overcome, the diet regulated, and smoking must be enjoyed in moderation or entirely stopped. Washing, scratching, and rubbing the parts must be entirely avoided. Any growths of redundant skin or mucous membrane must be removed. As a laxative, Atkinson prefers a saline water in preference to such drugs as podophyllin, which increase the trouble. Patients should accustom themselves to go to stool just before retiring. In some cases bromide of potassium may be taken when necessary in order to produce sleep; but healthy fatigue from bodily exercise is the best soporific.

Locally, Atkinson finds suppositories containing a grain and a half of extract of belladonna or four grains of the watery extract of opium useful. Chloral is too irritating. One of the best applications is a saturated solution of boracic acid. Yellow wash and mercurial ointment are sometimes of use, but should not be rubbed in. Tar ointments are likewise of use, but are disagreeable to most people. The patient must avoid sitting upon cushioned seats.

Treatment of Erysipelas. — Lewis (*Jour. of Cutaneous and Venereal Diseases*, September, 1885) recommends Barwell's treatment: a preliminary purge and the local application of the white lead of the paint-shops mixed with a dryer. The paint should be thicker than for ordinary use. It peels off readily when desquamation begins, even from the head. In Lewis's experience the most astonishingly rapid cures have been obtained.

Brucine in Pruritus and other Skin-Diseases.—Dr. Thomas J. Mays (*Therapeutic Gazette*, June, 1885), in an article on the physiological action of cocaine and of its analogue brucine, says of the latter that its action is most decided and definite on the cutaneous surface. A five-per-cent. solution relieves the pain in aphthæ of the mouth, and the same solution applied with a small sponge or camel's-hair pencil to the amount of ten or fifteen drops over a small area or more over larger surfaces allays the irritation of pruritus and of der-

matitis. If weaker solutions are inefficient, stronger ones can be used. It shows its effects in five to ten minutes. In making a solution of the alkaloid, five drops of hydrochloric or sulphuric acid must be added to each gramme. It is preferable to use either the nitrate or the sulphate of the alkaloid.

Treatment of Boils.—Gingeot (*Bul. Gén. de Thérap.*, 1885) recommends painting the lesions with repeated layers of tincture of iodine until the skin is dark brown. A single application will sometimes abort the lesion, but usually relapses take place and numerous applications must be made. Internally, Gingeot thinks nothing so useful as the sulphide of calcium of Ringer.

THE INFLUENCE OF MALARIAL POISONING UPON PREGNANT WOMEN.

BY W. THORNTON PARKER, M.D. (Munich),

Newport, Rhode Island.

In the *Medical Record* for August 29, 1885, I noticed the following reference to a subject in which I feel considerable interest:

"Mendel and Ritter have recorded the comparative immunity of pregnancy from malarial attacks, for which the latter accounts by the smaller degree of exposure to malarial influences during pregnancy. On the other hand, Göth, of Klausenburg, found (*Zeitsch. für Geb. und Gyn.*, Band vi. S. 17, 1881) that, during a severe epidemic of a malarial nature, 46 out of 881 pregnant women were attacked; and, of these 46, in 19 the labor was premature, and in some the children were still-born; and, even when they were alive, the size and weight were abnormally low.

"Bompani also (*Centralbl. für Gyn.*, 1884) is of opinion that malaria causes more premature labors than syphilis."

The observations of Mendel and Ritter may be correct as regards malarial influences in Germany, but the opinion of Bompani coincides more nearly with my own experience; while, to my mind, the statement of Göth, which contradicts the theory of Mendel and Ritter, does not sufficiently emphasize the danger from malarial poisoning.

It has been stated that in our Western States a very general belief exists that during pregnancy the mother is protected from malarial poisoning. Such a belief is, like many others that are to be found among the ignorant and superstitious, opposed to scientific truth.

Pregnancy is a process which proceeds most satisfactorily when taking place in a healthy woman impregnated by a healthy husband, and neither mother nor child can thrive well if the surroundings are unhealthy and unfavorable, or if the mind is in constant anxiety and unrest. The care and consideration shown by the ancient Romans for pregnant women are well known, and the justice and wisdom they exhibited then are models for all time. The influence malarial poisoning exercises upon the mother and unborn child, like every other poisonous and depressing influence, is bad. In my experience in Western sections where malarial fevers prevailed, I found miscarriages frequent, and the proportion greatest in those who suffered most from general malarial poisoning. If the child escape early destruction, it is generally apt to be puny, weak, and miserable, and especially liable to malarial poisonous inception later in life.

The practice of consumptive women marrying in the hope that by becoming pregnant the dreadful disease will be arrested in its course was founded upon just such erroneous ideas, and marriages of women known to be victims of chronic malarial diseases are also to be deprecated. The woman suffering from malarial poisoning should be urged by her physician to submit herself to a thorough course of treatment to eradicate the disease before marriage, and, if pregnant, to arrest the progress of the taint by every possible means.

The future strength of constitution in the child depends upon a healthy blood-supply from the mother.

It is, of course, generally admitted that the exhibition of quinine in this condition may in fact injure the condition of the child in the uterus; but that its action may influence the muscular contraction of the womb sufficiently to produce abortion is not yet proved. Abortion and miscarriage follow not on account of the medicine administered, but in spite of it.

We have only to consider the natural healthy state of a pregnant woman to recognize at once that any deviation from the standard, any reception of morbid, depressing influences, physical as well as mental, must be injurious. As a matter of

fact, the inception of the malarial poison may be dangerous, if not fatal, to the child, and oftentimes for the mother as well.

The danger is a common one. We can readily prove, upon investigation, that the children and the grandchildren of our healthy Western pioneers who settled in malarious regions are noticeably inferior in constitutional strength to their progenitors. Of course, exceptions are numerous, and the conditions of mild climate affording a large amount of out-of-door life are, in a multitude of cases, a valuable offset to the chances for the malaria everywhere so prevalent.

The numbers of premature labors and of still-born and puny, sickly children in malarial regions, together with the general poor condition of the puerperal woman, would be sufficient proof to most observers of the effect of this poison upon pregnant women. Labors are more tedious and in every respect more dangerous, and the liability to uterine inertia and to post-partum hemorrhage is greater, among women who have suffered from chills and fever and who reside constantly in "malarious districts."

The puerperal woman is liable to malarial poisoning: this fact is oftentimes a strong argument for the use of artificial food for the infant. The new discoveries of late in the feeding and management of infants can be applied with advantage to the infant of a mother suffering from malarial poisoning and whose milk is poisonous in consequence.

For the protection of the pregnant woman I find a certain course of treatment always desirable, and especially valuable in the treatment of cases under consideration. In the first place, in addition to quinine, which is indispensable, I pay attention to the bowels, carefully opposing any tendency to constipation. The effervescent tartrate of soda is the best mild aperient that I know of. It is especially grateful to the stomach. Its action is so gentle that there is absolutely no risk in administering it. If necessary, I increase the dose, giving four or even five teaspoonfuls in cold water ten or fifteen minutes before breakfast frequently during the week. The daily sponge-bath is almost always to be recommended for all classes of patients, rich and poor, strong and delicate. Exercise daily in the open air, and good nutritious food and pleasant surroundings, with cheerful society, all these desirable things are aimed at.

For the malarial infection I use the German preparation of hydrochlorate of quinine* as being best suited for such cases and least liable to injure either the mother or child. If iron is indicated, I know of no better preparation than Wyeth's dialyzed iron.

For the general cleanliness of the vagina, boro-glyceride vaginal suppositories, made by Metcalf & Co., of Boston, I find useful, and I always recommend the use of the bidet with tepid water almost daily, but with great care.† I regard the attention to the vagina of great importance. Keeping the rectum and vagina clear and clean will exert a powerful influence for good in the general management of cases of pregnancy.

The influence of malarial poisoning upon pregnant women is, we have seen, a common evil, and should receive decided attention. With regard to the importance of considering its action as a cause of ordinary uterine disorders in the non-pregnant, our medical journals furnish many valuable cases for illustration.‡ Barnes§ refers to this influence, asserting that in menstruating women the secretion is diminished and the color is *pale*. The depressing, enervating influences of the poison must act readily upon the delicate sexual organs of non-pregnant women. The law is practically the same for the non-pregnant and the pregnant: anything which lessens the vital forces, weakening and deranging the system, must of course leave its mark on organs so sensitive and so easily disturbed from normal action. The poverty of the blood in such cases would be sufficient for much disorder. Any argument to prove that the pregnant or non-pregnant woman can endure exposure to malarial poisoning without fear of injurious consequences must be erroneous.

NEWPORT, RHODE ISLAND, September, 1885.

W. K. BOWLING, M.D., ex-President of the American Medical Association, died August 6, 1885, at his home, near Nashville, Tennessee, aged seventy-seven years.

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* *Vide* Philadelphia Medical News, April 28, 1883.

† In using the bidet, I insist upon the syringes made by Tiemann & Co., as being the safest. *Vide* New York Medical Record, July 5, 1879.

‡ *Vide* Gynæcological Journal, vol. ii. 1870, p. 164 *et seq.* ("Metrorrhagia as occasioned by Malaria"); ibid., vol. iv., 1871, p. 7 ("Malarial Leucorrhœa"); ibid., vol. v., 1871, p. 39 ("Uterine Neuralgia as occasioned by Malaria").

§ "Diseases of Women," p. 243.

NOTES OF HOSPITAL PRACTICE.

MEDICO-CHIRURGICAL COLLEGE.

CLINIC OF WILLIAM F. WAUGH, M.D.,

Professor of Practice and Clinical Medicine.

CASES OF ABDOMINAL PULSATION.

THE first case to which I ask your attention is that of A. B., a native of Ireland, 22 years old, who works in a foundry. He has a pulsation in his chest, which has attracted his attention for more than a year. He complains also of dyspnœa and a troublesome cough; he expectorates a little tough, adhesive mucus, and sometimes blood. He says he has dyspepsia very badly; but I find he means gastric catarrh, an affection frequently confounded with dyspepsia. You see that he is pale and emaciated; his lips have a slaty-blue tint; his hands are cold, the palms wet and clammy. Notice how the perspiration gathers upon his forehead and rolls down in great drops, though the room is by no means warm. Altogether, his whole appearance is that of a man who is seriously ill.

When I press my finger against the back of his hand, see how slowly the white mark disappears before the returning blood. The capillary circulation is evidently sluggish. His pulse is feeble, and if you place all four fingers of one hand upon the artery, you will find that it feels as though the vessel were but half filled with blood. We now request our patient to strip to the waist, and at once our attention is arrested by an unusual sight.

The apex-beat of the heart is seen at the point of the ensiform cartilage in the epigastrium. On the right side there is an abnormal prominence below the ribs. The blue veins, engorged with blood, stand out with unusual distinctness on the surface. By placing the hand over the epigastrium, the pulsation is found to be strong and forcible. On percussion in the cardiac region, you note that the dulness we expect to find is absent, while lower down and to the right, under the sternum, the dulness is marked. The liver is considerably enlarged. Auscultation reveals the sonorous râles of bronchial catarrh.

The heart-sounds are normal, except that the first sound is prolonged into a murmur, heard most plainly at the apex. This, as you know, is indicative of disease of the mitral valve, allowing regurgitation.

Let us see if we cannot with this key unlock the mystery of the case, and with it account for all the symptoms we have quoted.

As part of the blood in the left ventricle flows back into the auricle, the aorta does not receive a full supply, and the arterial system is imperfectly filled. The blood coming from the lungs through the pulmonary veins finds the left auricle already partly filled with blood, which has regurgitated through the imperfect valve. Hence the pulmonary veins are unable to empty themselves, and the lungs are engorged with the blood which cannot be carried away. This causes a tendency to pulmonary congestions and catarrhs, and sometimes the capillaries give way, and we have hæmoptysis. This also causes the dyspnœa, which becomes very great whenever an acute catarrhal attack supervenes. But, the lungs being distended with blood, there is also obstruction to the ingress of fresh supplies from the right ventricle through the pulmonary artery. Here is where nature makes an attempt to overcome the obstruction by a hypertrophy, increasing the power of the right ventricle.

As the pressure of the blood dammed up in the lungs increases, the contractions of the right ventricle become more forcible in the effort to propel the blood through the pulmonary capillaries and thus keep up the circulation. As long as this process is kept up, the patient may enjoy a reasonable degree of comfort; so much so that our patient has passed through this stage without suspecting that he was ill enough to require the aid of a physician. But compensatory hypertrophy cannot go on indefinitely, and the limit has been reached in this case. The original disease still increasing, the right ventricle has at last yielded to the pressure, and its walls have dilated. The right auricle remains incompletely emptied; the venæ cavæ are unable to discharge their constantly incoming supplies, and the whole venous circulation is gorged with the blood which can find no outlet. The hepatic veins are unable to remove the blood from the liver, and the distention of its capillaries has notably increased its bulk. The congestion extends back to

the roots of the portal vein; enlargement of the spleen appears; engorgement of the gastro-intestinal veins predisposes to catarrh of these tracts, while over-filled veins, cyanosis, and transudation of serum appear over the whole body. One effect we would expect to find is a diminution of the urine, owing to the feeble pressure in the renal artery, and on inquiry we find this to be the case.

The prognosis here is bad enough. Death will occur from intercurrent disease, probably of the lungs, or else from exhaustion from increasing obstruction of the circulation, with general dropsy. We may for a time sustain the failing heart by giving digitalis, and when that loses its effect we may prolong life a few weeks by the aid of caffeine. We endeavor to keep up the quality of his blood by a carefully-regulated diet; we limit its bulk by eschewing liquids; and we endeavor to cure the pulmonary accidents as promptly as possible. Do not feel discouraged that you can do no more. Man is but mortal, and in our most perfect cures we do but prolong life; while in no cases can the physician better show his skill than in the treatment of incurable diseases.

My next case is also one where the symptom which causes most complaint is abnormal pulsation.

This lady is 20 years of age; has had indigestion with pyrosis for years, and has also suffered from menstrual irregularity. She complains of severe pain in the epigastrium, occurring once or oftener every day; of distress after eating, eructations of gas, and the other symptoms of catarrh of the stomach. Her bowels are constipated, her face is sallow, complexion muddy, and she is thin and anæmic. But her greatest trouble consists in a pulsation —which you can plainly see as she lies on her back—situated about two inches above and to the right of the umbilicus. On palpation, we feel what at first appears to be a tumor; but we find it is the aorta passing over the bodies of the vertebræ, which, in a person as thin as this girl, may cause the pulsation. This might be mistaken for an aneurism; but we exclude this by the sex and age, the absence of *bruit*, of disorder of the circulation below the point in question, and of pressure-symptoms.

A tumor of the stomach might also cause visible pulsation if it lay directly over the artery; but, as such tumors are invariably cancers, we may exclude them by her age.

Now, gentlemen, what shall we prescribe for this case? Iron, for her anæmia? No, for two reasons. First, her gastric catarrh will not permit her to take any form of chalybeate medication. I found this out years ago in a similar case, in the days when I thought iron was called for in every case of debility as certainly as mercury is called for in syphilis. You cannot give this girl in her present condition either iron, arsenic, astringent metals, vegetable bitters, mineral acids, cod-liver oil, alcohol, or malt liquors.

The second reason is this: Both her parents died with pulmonary consumption, the father very soon after her birth. She inherits in a striking degree the peculiarity of constitution which predisposes to tubercular affections. In her childhood she was subject to epistaxis, and after menstruation was established she had once at least pulmonary hemorrhage. She has always been fragile in physique and precocious in intellect. During her mother's last illness, she showed the most noble devotion and judgment far beyond her years, rising from a sick-bed to nurse her.

Now, you will find, gentlemen, that in such a case as this, if you succeed in removing the anæmia and in restoring to her cheeks the rosy hue of health, the tubercular tendency, which has as yet lain dormant, will be roused into activity, and you will soon have an acute manifestation of the disease in some form. With the decadence of the humoral theory we have learned that the difficulty does not consist in a lack of iron in the blood, but in a defective structure of the solid tissues. What element, then, gives strength and firmness to every cell of which our bodies are constructed? Lime.

In the whole group of diathetic diseases we find, of late years, one great authority after another recommending the salts of lime. From this fact alone we might, with a good deal of plausibility, reason back to the ground that in this group the essential disease-factor consists in a deficiency of lime in the solid tissues. Is it, then, the panacea for the various forms of consumption, the long-looked-for remedy which will enable us to rescue the great army which every year, month, or week

marches down to the consumptive's grave? By no means. It has no power whatever over the development of the tubercle-bacillus; it is no germicide. In the treatment of tubercular consumption its uses are unusually clear-cut, limited, and defined. It is *the* remedy *par excellence* for colliquative diarrhœa, bronchorrhœa, and night-sweats. Wherever the blood-serum is escaping through cells too weak to retain it, the salts of lime are indicated. For the fever, the cough, and the dyspnœa it is useless.

But its true *rôle* is in the pre-tubercular state,—the condition which Formad has so beautifully shown as constituting the inheritance of children of consumptives, and of which we have a typical example before us to-day.

Here the indication is for lime, and not for iron. Remember, you give it not for the relief of a symptom, but as a tissue-food; also, that as a tonic it is the slowest of remedies: you may give it for months before its effects are manifest. Administer it in minute doses, but persistently,—for years, if need be.

The form of the salt is of some importance. I have learned to prefer the lacto-phosphate, believing it to be more readily soluble and assimilable than the hypophosphites. It is sometimes difficult to obtain it pure. Not long since I returned some to one of our leading druggists because it did not readily dissolve in water. He stoutly maintained its purity, and produced the original package bearing the name of Merck, of Darmstadt. It was insoluble, however, and a pure sample procured from Powers & Weightman quickly showed the difference.

We will direct this young lady to purchase an ounce of the salt, and take five grains daily, in divided doses. For the gastric catarrh we will order her five drops of wine of ipecacuanha and ten grains of magnesia, to be taken in a cup of very hot water before each meal. She must avoid food which experience has taught her will disagree, without limiting her diet unnecessarily. She must carefully guard against taking cold; must take daily exercise; and may go to the mountains in summer, but not to the sea-shore.

The vapor of tincture of benzoin affords relief after inhalation, in acute coryza.

TRANSLATIONS.

Treatment of Acute Fibrinous Pneumonia by Parenchymatous Injections.—In a recent communication to the Académie des Sciences (*La France Médicale*, No. 98), Prof. Lépine speaks in terms of commendation of a mode of treatment which he has practised for some time for acute pneumonia, and which has yielded brilliant results. He says, "If, in a case of pneumonia, on the third or fourth day, an injection be made into the hepatized part, by means of a capillary needle, of several cubic centimetres of an aqueous solution (1 to 4000) of mercuric bichloride, in three or four places several centimetres distant from each other, preferably at the periphery of the lesion, in the attempt to circumscribe it (that is to say, twenty to twenty-five cubic centimetres, containing a quantity of sublimate absolutely inoffensive to the patient) the following results are noticed:

"1. At the spot of the injections an immediate diminution of the crepitant râles and of the souffle, which are *partly* replaced by larger râles.

"2. Some hours later, a transitory exacerbation of the central temperature.

"3. On the next day, a great improvement in the general condition, and notably a precocious defervescence.

"4. Finally, by resolution, which (judging by the persistence of the souffle, especially in the parts which have not received the injection) is only completed at the end of several days,—that is to say, at the time that it would have occurred if the pneumonia had been allowed to pursue its natural course or treated by the ordinary means."

These are the results which Prof. Lépine with his assistants and clinical students has seen demonstrated in several cases, and which appeared to prove the utility of this treatment directed against the pneumonic process; the more so since the patients subjected to it were not suffering with congestive pneumonia, but with solid hepatization, as shown by the resistance offered to the needle by the lung. As to the *relative* innocuousness of intra-pulmonary parenchymatous injections of corrosive sublimate in red hepatization (he had not practised it in *gray* hepatization), provided that they are made at a place remote from the great vessels of the root, and that the needle does not penetrate

deeper than 0.03 m. to 0.04 m. into the lung, it is demonstrated by the fact that not a single patient has been lost, and he has not had any accident. The slight pain caused by the needle may be prevented by the previous injection of morphine.

Experiments upon dogs with a solution a little stronger showed that a certain amount of irritation was produced in a healthy (dog's) lung by the injection. Possibly a substance may be found less irritating to the lung than the bichloride, and still capable of suspending or modifying the pneumonic process. At all events, the method of treatment by intra-parenchymatous injections, which has not hitherto been applied to the treatment of pneumonia, appeared to the reporter to be susceptible of being employed in certain cases, though always with prudence, and, of course, without interfering with the treatment of the general condition and the multiple indications of the malady.

Treatment of Diabetes Mellitus.—Dr. Dornblüth, of Rostock (*Deutsches Archiv für Klinische Med.*), gives the results of carefully-conducted experiments upon four cases of diabetes mellitus.

The diet was strictly limited to meat, eggs, soup, and coffee without milk. The only drink allowed was seltzer, with a little red wine. Occasionally some other food was given, but no leguminous vegetables. Moderate exercise was enjoined. The remedies tested were salicylate of soda, iodoform, carbolic acid, and salicin.

Iodoform was not found to influence the excretion of sugar in any way. The others were each effectual in reducing the amount of sugar, and in compensating for the ill effects of a return to amylaceous food up to a certain point, and also in either improving the general health or checking its progressive decline. None of the cases, however, were cured, all being far advanced when coming under observation.

Carbolic acid was condemned for its bad effects on the system in the large doses required to affect the excretion of sugar. Salicylic acid causes headache, aural symptoms, and is badly borne by the stomach.

Salicin was equally—sometimes even more—efficient as a remedy, and had no injurious or troublesome effects. The largest doses found necessary (eight grammes per dose, eighteen grammes per day) were taken without any detriment.

Serious objections may be urged against the purely dietetic treatment of diabetes. It is not long tolerated by the patient; exposes him to the grave danger of acetonæmia; is expensive, and difficult to enforce on the patient, who is sure to be discontented; and, finally, is at best but a palliative, not aiming at a curative result. Salicin should be given in three- to six-gramme doses, half an hour before each meal. When no more sugar can be detected in the urine, we may allow one meal of amylaceous food daily, increasing the dose of salicin.

Glycerin Treatment of Trichinosis.—Dr. Fiedler (*Deutsches Archiv für Klin. Med.*) repeats his former recommendation of glycerin, which, brought in contact with trichina, by the absorption of water from their tissues causes them to shrivel up and die. Experiments made on rabbits were unsatisfactory because, as Fiedler supposes, the glycerin absorbed so much water from the stomach that it was too weak to have any effect when it reached the trichina in the small intestine. He recommends, on the strength of experiments by Unna, of Hamburg, that the remedy be given in elastic capsules of keratin, which resist the action of the acid gastric juice and are soluble only in the intestinal fluids. The dose advised is a tablespoonful of *pure* glycerin, repeated every hour. The treatment is to be prefaced by a brisk purge, and supplemented by the administration of glycerin by the rectum (better by the colon), and by the ingestion of alcohol in undiluted form, which has also the power of absorbing water.

While the value of this method is yet to be shown in actual practice, the fact has been proved that glycerin can be given in the doses recommended without any effect more serious than a sense of thirst and burning in the throat. The possible occurrence of hæmoglobinuria may be disregarded in view of the grave danger to which trichina cases are subject, while the acknowledged inefficiency of all other methods of treatment offers another reason for giving glycerin a thorough trial.

The Use of Cocaine prior to Introducing the Stomach-Tube.—Dr. Lafosse writes to the *Bulletin Générale de Thérapeutique* that in six cases he had found the introduction of the tube facilitated, and dyspnœa prevented, by the preliminary application of cocaine (two-per-cent. solution) to the pharynx.

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EDITORIAL.

THE OPERATIVE TREATMENT OF INTESTINAL OBSTRUCTION.

IN the treatment of acute intestinal obstruction, laparotomy is no longer regarded as an operation which may possibly be required when the patient is beyond other treatment, but the limits within which it must be performed, as early as possible, are speedily being defined. Several papers upon the therapeutics of intestinal obstruction were read before the British Medical Association at its recent meeting, in which the general principles which ought to guide the surgeon in the operative treatment of this condition are clearly expressed and the methods of operation discussed.

Of course, in such cases a correct diagnosis is essential to proper treatment. Intestinal obstruction being a generic term including several morbid states, it is necessary to ascertain the nature of the obstruction and the cause of the symptoms. "It is impossible to discuss under one heading," says Mr. Frederick Treves in his communication, "the treatment of a collection of symptoms that, although alike, may depend upon such different conditions as a fibrous stricture of the bowel on the one hand and an impacted calculus on the other. It would be as reasonable to consider retention of urine as a distinct and isolated malady, without recognizing that it may depend upon a stricture of the urethra in one case and an impacted calculus in the other."

It is the acute form of ileus, demanding prompt treatment, which tests the diagnostic powers; for, if an error is made in not recognizing the nature and gravity of the symptoms, the time will rapidly pass during which an operation might be successful, and the patient will perish. In the chronic cases, and in chronic cases with an exacerbation of acute symptoms, operative measures may or may not be needed to supplement the customary and less dangerous expedients of irrigation of the stomach, distention of the bowel with water or air, massage, electricity, and position.

Mr. Treves, in his valuable paper already referred to, mentioned three anatomical conditions to which may be ascribed the fairly-defined collection of symptoms that make up the condition clinically known as acute obstruction,—*i.e.*, hernia-like strangulation of the bowel, volvulus of the sigmoid flexure, and acute invagination. Under the title of hernia-like protrusion of the bowel, Mr. Treves groups many structural causes of obstruction, among the most common being strangulation by peritoneal bands of all kinds, strangulation by omental ligaments or cords, strangulation by Meckel's diverticulum, by an adherent appendix or Fallopian tube, and, finally, strangulation through slots and apertures, including internal hernia. In each of these a knuckle or loop of bowel is held in bondage until it becomes strangulated, the mechanism being much the same as that of strangulated external hernia. The varieties of intestinal obstruction classed under the above general heading are comparatively common, and form together no less than one-fourth of all known varieties of intestinal occlusion, both acute and chronic.

The treatment proposed was absolute rest, deprivation of food, ice or hot tea in small quantities, and opium in the form of hypodermic injections of morphine. An enema may be employed if the colon be occupied by fæces. If there is no relief and the main points of the diagnosis are clear, laparotomy should be performed within the first twenty-four hours. The same measures are indicated in acute vol-

vulus of the sigmoid flexure, which furnishes one-fortieth part of all the cases of intestinal obstruction. In both, the median abdominal incision is preferred, and the temporary establishment of an artificial anus recommended.

In acute intussusception, if the same preliminary measures have failed to lead to spontaneous reduction, resort should be had to distention by large enemata or by insufflation cautiously done, and, if found irreducible, early laparotomy is recommended, at least within the first forty-eight hours, and, if possible, within the first twenty-four hours, provided, of course, that all other measures have failed. If reduction is found to be impossible after opening the abdomen, or the gut found to be gangrenous, the whole of the involved bowel should be resected and a temporary artificial anus established. This form of obstruction is quite common, and forms no less than one-third of all known varieties of the affection, excluding hernia and obstructions due to congenital defects. Acute cases are defined as those which, if they follow an uninterrupted course, would end in death in seven days: they form about fifty per cent., according to Mr. Treves, of the whole number of invagination cases, and the same proportion, or one-half, of all the examples of the disease are met with in patients under ten years of age. In children an anæsthetic is required during the treatment by forced enema or insufflation, and in many cases reduction can be effected in this way without resort to operation, which, however, must not be too long delayed.

The views of treatment are well summarized in the conclusions of another paper, read by Mr. Mayo Robson at the same meeting, as follows:

"1. In chronic cases—that is, where obstruction is the prominent symptom—medical treatment, such as injection, belladonna, massage, galvanism, etc., will often relieve or cure; or colotomy, or laparotomy, or some other operation, will be so plainly indicated as to leave no doubt as to what should be done.

"In acute symptoms supervening upon chronic, medical treatment—for example, starvation, rest, and opium—may still often bring about a cure; but laparotomy, as a means of diagnosis and possibly of treatment, may be demanded.

"In initially acute cases, delay is often as dangerous as it would be to wait for an external hernia to reduce itself by its own efforts.

"Laparotomy should be performed early—(*a*) as a means of making a diagnosis; (*b*) as a means of removing the cause of strangulation, if such be discovered; and (*c*) as a means of giving relief, if no cause can be found, by opening the bowel above the point of obstruction and carefully suturing it to the surface."

If the induction as to the cause of the obstruction be correct in a given case corresponding with the above condition, it is believed that laparotomy, without materially increasing the risk of a fatal termination, may offer, if not the only, at least the best, chance for life.

THE WORK OF THE COMMITTEE ON ORGANIZATION OF THE INTERNATIONAL MEDICAL CONGRESS.

THE *Journal of the American Medical Association* of last week publishes the proceedings of the Committee on Organization of the International Medical Congress at a meeting held in New York on the 3d inst. The list of appointments and nominations, with Prof. Austin Flint at the head, is one which we think will meet with the endorsement of the profession generally. It is seen that when the time for final action came the members of the Committee, rising to the responsibility resting upon them, acted with marked discretion, good judgment, and an evi-

dent desire to discharge faithfully and impartially the duty for which they were appointed.

The Code question was relegated to the background, and the delegate method proposed by the former committee was abandoned, so that the doors of the Congress, as in its previous sessions, will be thrown open to all reputable members of the regular medical profession. The Committee has done its work so much better than the manner of its appointment had led us to expect, that the result is the more acceptable and gratifying. It was a judicious course to pursue to leave some of the appointments unfilled, so that the Executive Committee may within thirty days insert the names of those who had withdrawn their names from the organization under a misapprehension of the motives and methods of the Committee on Organization. It is hoped, the way being now open for harmonious co-operation, that all may unite in striving to secure the success of the Congress, the prospects for which are brighter at present than they have been since the invitation to meet in 1887 in Washington was accepted.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

ON the 12th inst. the fourteenth session of the French Association for the Advancement of Science opened at Grenoble, under the presidency of Professor Verneuil. His opening speech, taking for his subject "Surgery in 1885," was full of the caustic wit of the veteran surgeon, and conveys some good hints that will apply quite as well in America as in France.

Dr. Verneuil began by saying that some had wished to exclude medicine from the circle of sciences and range it simply among the arts, and against this he entered his protest. He wished to inscribe resolutely among the sciences that portion of human knowledge which serves to introduce us into the world, to keep us here as long as possible, to develop, restore, and protect our organs, rendering great services at all periods of life. In fact, it joins to its own proper merits that of keeping in good health those *savants* who decry it. It is a singular thing that of all the applied sciences medicine, which is incontestably the most useful, is the most disputed. It is also the most difficult; but nevertheless everybody thinks himself capable of expatiating on it or prating about it. "The art of curing has long been divided into two branches, medicine and surgery. Every century has found some one to deplore this and show its dangers, but they only preach in the desert, for the separation seems to be more and more marked. Plenty of doctors will admit without blushing that they know nothing of surgery, and the surgeons, if they do not proclaim it, prove very often, alas! that they know very little of medicine. All the world are accomplices to this state of things, and they all suffer from it, but no one complains. It is curious, indeed, to see how the world judges of this matter. You will hear plenty of people say that they believe in surgery but not in medicine, and when you ask why, they will answer quite gravely that 'surgery is a positive art, and medicine is a conjectural one; that the first is daily making advances, while the last has not progressed since the time of Hippocrates.' From this homage to surgery you infer that this fine talker will give all his confidence to those who practise it. Not at all. Out of twenty persons to whom we offer our services and our armamentarium, fifteen at least will refuse outright; and if some doctor, some apothecary, or even a simple herbalist, will let them see a possible way to a cure —without operation—by some simple drug, a plaster, or the omnipotent massage, or with the electrical current *more or less continued*, this convinced apostle of surgery will place himself at once in their hands. Another popular prejudice is the idea that surgical affections can only be cured by violent means, —hot iron and fire, in fact, or cold steel,—so that the surgeon is often compared to a butcher steeped in blood and carving flesh with immense cuts. Some persons, thinking to be witty at our expense, call us 'sausage-makers,' without thinking that they are comparing themselves to the porker, the most filthy of the quadrupeds! But it is enough for any one to visit any of our surgical wards to convince himself that the larger number of our sick are cured without losing a drop of blood, or even one millimetre of their skins. In fact, of one hundred patients, not one-fifth, or at most not one-quarter, have to submit to a real cutting operation.

"However, the number of operations proves nothing against their legitimacy. A well-known practitioner operates a great deal because patients who need operating are brought to him in large numbers. The question is not, Does he operate *often?* but, Does he operate *too often?* for quantity by itself does not constitute excess. If the abuse of operating be condemned, no one dreams of proscribing the

use of it. Let us recognize, however, that some cases treated by operations might have been cured without: for instance, a fracture, for which we amputate, or a white tumor, for which we perform resection. But are we guilty for having amputated or having resected? Not at all, for we have based the operation on probabilities. Conservation offered us twenty chances of safety, but the sacrifice of the member offered forty! So in operating we acted as real conservative surgeons.

"Take a case of ordinary gravity, where operation is offered and the patient refuses. He consults elsewhere, and a pharmaceutical treatment is proposed; he employs it, and is cured. We defend ourselves by invoking the usual hopelessness of drug-treatment, and also the length of time (for many patients want to return to business quickly). Then, again, surgeons are often impatient: so that if the patients say, 'Time is money,' I suspect the surgeons may murmur in an undertone, 'Operation is also money.' There is only one way to prevent errors of prognosis,—that is, for surgeons to do as the public does, proclaim operations to be the *ultima ratio*, and not perform them until *all* other means have been tried. Many do not try *everything*. They content themselves by saying, 'All the ordinary means have been exhausted,' etc. In this they imitate those good people who, to excuse themselves for going to quacks and somnambulists, say they have been 'abandoned by all the doctors,' when in reality they have only consulted one or two obscure practitioners, two druggists, and the veterinary surgeon, with perhaps a neighboring nurse. Many a time, when interrogating patients who come to consult me, I have been struck with the insufficiency of the *therapeutical* means that had been prescribed for them. Often I have sent them to the druggist or the bandage-maker, or even to the sea-side or watering-place, to see them return relieved, if not cured; and I am always proud of these conservative victories.

"Certainly in the material point of view, when the hour of remuneration has come, it is not so fine to see that we are, as a rule, offered only one-fourth as much for having laboriously saved a member as for having quickly cut it off! But, then, with what great prestige is the surgeon surrounded who never recommends useless sacrifices, and what satisfaction is his when the result justifies his advice! To take only one example: what glory would be his who could cure cancer without operation! While we are in the humor, let us confess that some men operate too much. At certain times and in certain countries, even in our days, the 'prurigo secandi' is a sporadic malady, endemic and epidemic, for which no vaccine has yet been found. In the seventeenth century transfusion was the rage; in the eighteenth, they trepanned any one who fell on his head or who was suspected of having more or less cracked his skull. During the wars of the end of last century and the first of this, every broken member was amputated. When I entered the profession, tenotomy was the rage. They cut all the tendons, all the ligaments, all the muscles in all parts of the body, pretending to cure all sorts of troubles, even stammering and humpback, bandy legs and deafness. Later the 'resection mania' arose. It flourished in England and Germany. When one specialist operated, all operated. When one cut something, all the rest did the same, except a little differently and with different tools. If some day a museum is founded of instruments, what immense glass cases will be needed to contain the lithotomes, urethrotomes, hysterotomes, and other machines in *tome*, including those little instruments—not named, I think—which are intended to cut the stenosis of the nasal canal! These contractions hardly ever exist, by the way, and when they do they don't need to be cut.

"Gynæcology and ophthalmology are disputing the place of honor on this new turf. I believe that success is with the first. Lately, for instance, independently of cauterizations, so often of no use, we have seen Emmet's operation, as well as Battey's, Hegar's, Alexander's, and many others. In fact, a gynæcologist risks passing for one having no merit if he doesn't produce a series of operations.

"The facility with which certain practices become popular is surprising. For instance, the '*raclage*' or '*rugination*' [scraping] of cold abscesses. The theory can be sustained, but it seems more prudent to rely on experience. For this we must wait; but the present generation won't do so. So they '*racler*' away, even penetrating to the spinal canal in doing so; and, notwithstanding the operation gives '*encouraging results*' (that is the usual expression), the poor patient goes to join his ancestors in a better world. A present mania consists in applying the actual-cautery points to all external affections. This has succeeded to sinapisms and blisters, which are quite as good, but the cautery has the advantage of having a striking '*mise en scène*' that shows off well. It is feared by children, and is not the joy of parents. These things may be useful, but they are abused in use. There is too much transfusion, too much trepanning, too much tenotomy, too much resection, too much excision of the iris, too much work done in the pelves of women, and entirely too much promenading of thermo-cautery on man's poor body. A great deal has been done of late years in the way of extirpations of the larynx, the pharynx, the uterus, the kidneys, etc. What has been the result? At most, ten per cent. cured. For those ten the operation has been of use to a greater or less degree; but what of the *ninety* others? Can abuse be denied?

"Another trouble with the people is that they want to be assured that their malady will not return: as if a gardener who pulls up the weeds can say they will not come back! Again, they will say, 'Oh, I won't go to Verneuil' (they suppress Doctor or Monsieur for any one who is known), 'because he won't do enough.' A mother, one of my former patients, can't bear to hear my name, because I advised her daughter to use crutches instead of operating. This discourse might be called 'The Confessions of a Surgeon;' but I don't wish to present my personality: I simply love truth, and I am not afraid to tell it. For a long time I have repeated constantly, '*Surgery is not what a vain people think it is*,' and I add to that this remark, '*Surgery is not that which surgeons themselves make it.*' It is this that I wished to represent to you today. To the world I would say that they are wrong to consider surgery as a narrow speciality, a sort of precise trade, like clock-making, for instance; also, they are wrong to insist on surgeons having that infallibility that constructors of machinery have; again, they are wrong to put their acts in contradiction to their words by judging lightly those things for which their incompetence is notorious. On the other hand, I wanted to say to my brothers that, if they wished to be classed with true skilled workers and not remain artisans, they must make light of their manual ability, take little credit for success in operations, but follow, above all, the therapeutic method,—that is to say, definite *cure* in the true sense of the word. Refuse all suggestion of being specialists, and remain modestly within the circle of general medicine. Be, above all, pathologists; extend your knowledge in etiology; try to perfect yourselves in diagnosis and prognosis; and be convinced that the maximum of cures will come to him who is the best educated and the wisest. Naturally you will follow the supreme end of medicine, cure of your patients, but you will use more care in the means of cure, prouder of being classed with therapeutists than with operators. You will only arm your hand at the last extremity, after having loyally tried all nature's remedies; when convinced of the impotence of all the hygienic and pharmaceutical agents; when the necessity of intervention is proved. Then always decide for the least dangerous of operations: '*actum minoris periculi.*' This may be the most radical, the most destructive in appearance. But we know that in certain wounds of members, for instance, amputation done quickly and high enough is ten times more conservative than resection; that for stone, lithotrity is less dangerous than cutting; that ovariotomy is more benign than multiplied injections of iodine. I propose this rule for young practitioners: When they have to decide between rival operations, put in the *first* rank efficacy; *second*, gentleness; *third*, facility. Always know how to refuse an operation. But you will say, 'But my neighbor will operate.' Well, let him do so. Most likely it will be a failure. He will pocket the *sesterces*, but you will gain the esteem. It's not much, some will say. It's a great deal, others will think, who assimilate medicine to the most sacred things, and repeat, with the poet,—

> 'Art is saintly. God made it so, that in the world
> Everything should not bend before power and gold.'

"To furnish the world with honest surgeons is my design. It is all the same to me to hear that in London, Vienna, or New York they operate more and better than they do in Paris, so long as they add that in the last city they cure oftener and kill a little less.

"'Happy the people who have no history,' has been said. Happy will be the surgeon who has no operating-case, and who knows how to do without it. I hope one day, thanks to progress, that surgery may cease to shed blood and to cause tears to flow."

Cholera discussion is the order of the day in France, and M. Chauveau had an interesting paper to read at Grenoble on the "*Preventive Inoculation for Cholera.*" He seems not inclined to give up the idea of inoculation yet, and thinks that under proper conditions science should allow attempts at prevention of cholera by injections of culture-liquids containing the comma-bacillus.

Prof. Bouchard, who followed with "*Clinical Observations and Experimental Researches on Cholera*," concluded a long paper with the following statements: "Analogy leads us to consider cholera as an infectious malady,—that is to say, a microbe malady. This microbe produces in the human organism a morbid poison (cholera). To this intoxication is soon added another poison (uræmic poison). *Myosis* is the indication of this last symptom. The pathogenic agent cannot inhabit exclusively the intestinal canal" (in his opinion). "The comma-bacillus *is not* the producing agent of the choleric poison."

To continue the subject of cholera, as it may closely interest America some day. M. J. Guérin recently read a paper on it at the Paris Académie de Médecine, in which he tried to show that its coming can be told by the existence of *cholera nostras*, which he thinks is almost the same malady. Prof. Brouardel went down to Marseilles as soon as the cholera broke out there, and he condemns the city authorities for having done nothing at all to prevent the disease since last year. The city is as dirty as ever, and nothing has been done even to commence the famous projected sewers. Dr. Brouardel inclines to the opinion that the cholera now at Marseilles has not been brought from Spain or India this year, but that it is the remains of last year's epidemic that has broken out again this hot

weather, finding a favorable hotbed of evolution there. It is to be hoped that it is only the tail of last year's invasion, and that it will go no farther. One of the curious remedies proposed to the Academy for cholera is that of *painting the abdomen with collodion*, reported by Dr. Drouet. A Dr. Patritti says the success of this method is so great that he applies it exclusively in cholera.

We have been having a little resurrection of blennorrhagia. First, at the Society of Biology in Paris, M. de Sinety stated that he had examined over sixty women with the disease, and in all except one he found in the pus a large number of the gonococci which seemed to have no relation to acidity or alkalinity of the secretion. He tried permanganate of potash, oxygenated water, and solutions of corrosive sublimate, but these antiseptics seemed to have no action on the micro-organism. The patients were cured of their discharge in six weeks, but the gonococci persisted even for several months afterwards. At the Grenoble Congress, M. Diday said that when a blennorrhagia was treated with copaiba, and then the treatment was stopped, the disease usually reappeared. From this he thought that the specific action of the medicine caused a diminution of the nutritive qualities in the parts where the gonococcus flourished, which was lost as the action of the balsam went off and allowed the gonococcus to come back.

M. Constantin Paul, who followed on this subject, said that increase in temperature would make these microbes succumb. He said he cured in eight to ten days with warm injections of a solution at $\frac{1}{20000}$ of the corrosive sublimate. Others followed by stating that many patients could not bear hot injections. Dr. Pamard advised this injection:

℞ Subnitrate of bismuth, 2 gr. 00 c.gr.;
Iodoform, 50 "
Mucilag. acaciæ, 100 "
M.

While on the subject, let us say a word or two on Dr. Bloch's remarks "*On the State of the Prepuce in Infant Jews.*" Two operators had made some four thousand seven hundred and ninety-nine circumcisions. They found that they very often had to operate on rudimentary prepuces not covering the gland. In more rare cases (one in five hundred, about) an absence (complete) of the prepuce was found. M. Landouzy remarked that there was an infirmity he noticed more often in Jews than in the other races, which was *flat foot.*

Prof. Grasset presented an interesting study of the clinical thermometer. The temperature of the body taken at the axilla, as we do every day, should be the index of the quantity of heat produced and the quantity *lost.* This second element, he claims, is not constant,—that in fact two patients having the same temperature do not give off the same quantity of heat, have not in fact the same quantity or intensity of fever, and therefore the emission of heat is not proportional to the degree marked on the thermometer and its indication is not exact. Dr. Grasset thinks that there is an easy means of rectifying this, which is to notice not only the final degree marked, but also the speed or quickness with which the mercurial column mounts up. In some patients it will go up quickly, in others the same instrument will reach its maximum slowly. This speed must be taken into account.

M. A. Luton proposed to make injections of metallic mercury into the intra-muscular tissue for treatment of syphilis. Some fifteen cases in which it was tried seem to confirm the author's theory. The absorption was so complete that stomatitis was observed. The injections were commenced with *one gramme* of the metal. It is recommended in grave cases of syphilis at the transition-period and in tertiary forms.

For Convulsions in Children (Dr. Jules Simon):

℞ Bromide of potassium, 1 gramme;
Musk, 0 gr. 05;
Syrup of codeine, 5 grammes;
Syrup of orange-flowers, 30 grammes;
Lime-water, 100 grammes.
M. Ft. potio.
S.—Teaspoonful to child of two years. To be preceded by an enema.

In the way of large cutting operations, M. Després has just operated on a woman 56 years old, by amputating *both* breasts for scirrhus at the same time. This was on the 17th of June. Two months later she left the hospital cured. The only thing to be noticed about the operation was that the patient had during fourteen days a regular high temperature of 39° C. in the morning and 39.4° C. in the evening, a regular rise and fall like the normal temperature. M. Després thought this was owing to the great extent of the suppuration.

Baron Léon de Lenval, of Nice, France, has just founded a prize of three thousand francs, to be given to the author of the best application of the microphonic principle to some portable apparatus for hearing-purposes. The prize will be awarded in September, 1888, during the session of the Fourth International Congress of Otology, to be held at Brussels.

THOMAS LINN, M.D.

PARIS, August 25, 1885.

NEW YORK.

THERE are many people, and, it would also seem, some physicians, who doubt the efficiency of quarantine against infectious diseases, yet in this city, a centre of travel from nearly every part of the globe, there have been scarcely half a dozen cases of either smallpox, yellow fever, or cholera during the season,—and this notwithstanding the

existence of epidemics of these diseases in this country or in Europe. Indeed, no case of true cholera has been reported. Whether or not the entrance of the few cases of yellow fever was due to any negligence on the part of the health-officer is doubtful. But it is fair to presume that the almost universally prevailing custom at present of having a physician on board of passenger-vessels aids not a little in the prevention of transportation of contagious diseases; and when we also take into consideration the fact that the voyage from distant ports usually requires a sufficient length of time to allow any germs of the disease to develop themselves in a manifest way, we readily understand why it is that our seaport quarantine has become so efficient. But our health authorities have not trusted alone to quarantine to keep out the cholera. They have appointed an unusually large number of physicians to visit the people in tenement-house districts, and have been prompt in securing the removal of garbage and dirt from the streets.

Too often it happens that the farce of sending a corps of men to sweep the streets without first sprinkling them to lay the dust, and of allowing from several hours to a day to pass before sending carts to take away the loose dirt, dust, and pieces of paper thus gathered together, is seen; and even when the carts do arrive the dust is shovelled carelessly into them, being heaped up above the level of the sideboards, without cover (not even a piece of old cloth being thrown over it), so that from the commencement of the cleansing-work to its completion the wind has had opportunity to carry a large portion of the filth into our houses or to scatter it again upon the streets. By first sprinkling the streets and putting the dirt immediately into barrels (with lids) to be carted to the dump, and by adopting the barrel-system of conveying ashes and garbage away from houses, our streets would be rendered far cleaner than with the amount of labor now required, to say nothing about the wide diffusion of the germs of disease which the present system especially favors.

As salt water contains an abundance of chlorides, does it not seem strange that cities situated near the sea, with only a limited supply of fresh water, do not clean their streets with sea-water, of which the supply is practically unlimited? By this means the streets of this great city might be kept neat and clean, and, the air being less contaminated by dust, there would be greater cleanliness possible inside of the houses both of the wealthy and of the poor.

Some of the officers of the Board of Health make a raid now and then on the venders of unwholesome articles of food, such as immature or over-ripe and spoiled fruit, spoiled meat, candy containing poisonous pigments, etc. In a large city the best and the worst of all things can be bought. If there were no purchasers for an unwholesome article of food, of course only good articles would be sent to the market for sale: just as when people cease to buy advertised medicines or to patronize quack doctors, quack doctors and advertised medicines seek more congenial surroundings. The selling of green fruit or of poisoned candies might perhaps be obviated by simply preventing their entrance into the market (for poisoned candies are usually made in wholesale-houses), but the trouble is that fruit picked after it has become ripe is apt to spoil before it reaches the consumer, and that which is picked too long before it has matured has not its best flavor and may be positively unwholesome. Caution should, therefore, be used in eating fruit bought in a large city. It is quite probable, however, that those who consume fruit and vegetables nearly at the point of undergoing decay get a better quality of food than those who always insist upon having only such articles as show no specks which may detract from their beauty or point to beginning decomposition.

So far we have had very few days of really hot weather, and within the last week or two there have been a number of days when the dampness and chilliness of the atmosphere have rendered it slightly uncomfortable without a fire. Since the early part of July cases of sunstroke have been very rare.

Regarding the typhoid outbreak at Bellevue Hospital, the following account has been given me by two house-physicians, Dr. Sayre and Dr. French, Dr. Sayre having seen most or all of the cases. The newspaper reports were exaggerated. Prior to July last the sewerage had been considered faulty, some cases of typhoid fever having developed among the attendants of the hospital, at least one or two of whom died from the disease. In July the pipe-system in the hospital began to undergo alterations in accordance with plans approved by the health authorities. During the course of the repairs, two nurses, two orderlies, one physician, one patient who had been in the hospital for another disease, and one carpenter were taken ill with typhoid fever. All of these persons must have contracted the disease within the walls of the hospital, unless it were the carpenter, who worked out a part of his time. In the case of Dr. Stokes, the plumber assured him that the pipe opening into his room had no connection with the sewer, the connection having been cut off. Notwithstanding this statement, the contrary was found to be the case, and when the doctor became ill the plumber admitted an oversight regarding this pipe and then stopped it up. Dr. Stokes was advised to leave and go to the country, where he is now convalescent. The symptoms in these cases were those usually present in typhoid fever, but were not of the severest form. Only two of the patients manifested marked

cerebral symptoms; none died. The house-physicians say that about an average number of cases of typhoid fever is being admitted from outside.

The two cases of death caused by the well-known and highly-esteemed druggist Am Ende, of Hoboken, who put up morphine in the place of quinine, for which the prescription called, have made a good deal of excited discussion as to how such accidents might be avoided. Perhaps the surest precaution to the patient would be that suggested in a satirical tone by one of our dailies,—namely, to require the druggist to take a dose of the preparation before sending it to the one for whom it was intended, the idea being that to compel a man to jeopardize his own life if he make a mistake will be the best safeguard against an error. It would be rather severe, however, upon a druggist doing a large prescription-business. It is with the same view that the State has established a law making a druggist committing such a mistake liable to imprisonment. We would naturally suppose that the druggist's respect for the life of his customers would be the strongest incentive to caution; but druggists are not very different from persons in other walks of life in their greater care for the lives and happiness of themselves than for those of other people, and if these are threatened their precautions against accident will be enhanced. We may suppose, at any rate, that, so far as the feeling of caution is concerned, the druggist has the highest motive against error in prescription-work. But the more nearly impossible it is to make an error, the less likely is an error to occur. Some druggists adopt the plan of having the clerk who has mixed the ingredients read off their names and quantities to a second person who has the original prescription in hand. But this method would of course be impracticable where the compounder was alone in the store. The causes of accidents seem to be either in the prescription itself (and therefore lying with the physician); in the druggist misunderstanding the prescription; in an abstracted state of mind, during which he unintentionally takes up the wrong drug; or in the close proximity of a non-poisonous with a poisonous drug looking alike and being kept in similar bottles. To say nothing about the first two sources of error, the latter, we might suppose, could be effectually guarded against by, for instance, putting all poisonous drugs, especially those poisonous in small doses, together, at a distance from the non-poisonous, particularly if they be alike in appearance; also by putting these different kinds of drugs into bottles of different forms, different sizes, and different colors, and by placing no two poisonous drugs of similar appearance close together. Drugs poisonous in minute quantities should be classed together. Thus the mere fact of taking a drug from this locality would excite caution; a bottle of different size, form, or color would further arouse suspicion; and if a mistake should be made of taking a bottle from the same shelf but containing a different drug, only a correspondingly small amount would be added to the prescription, not sufficient to kill. No druggist, however abstracted in mind, or however much troubled by talkative customers, would be likely (if I may exaggerate the idea) to go to the roof for morphine when quinine was demanded which had its place in the cellar; and the attention of any druggist would be called to his mistake should he take up a gallon bottle for a quart one, a square bottle for one of round form, or a white bottle for a black one.

Our medical colleges will soon again open their doors for the usual host of students aspiring to Æsculapian honors. The proposed new building for the College of Physicians and Surgeons will not be ready for the approaching session. Many people are now returning to the city from the country; but the physicians who are most regular in their attendance on our Medical Societies will not begin their labors of the fall and winter season until a little later.

Two stories have been added to the laboratory of the Medical College of the University of the City of New York. Under the prudent and intelligent direction of Dr. Carpenter, the pathological laboratory has become an interesting and important part of the collegiate course.

R. C. S.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, JUNE 4, 1885.

The President, B. F. BAER, M.D., in the chair.

BINIODIDE OF MERCURY AS A DISINFECTANT IN OBSTETRICS. BY DR. E. R. BERNARDY.

MY attention was first attracted to the use of the biniodide of mercury as a germicide by Dr. Miguel, who published in *L'Annuaire Météorologique de Montsouris* the results of some experiments made to determine the minimum amount of a disinfectant necessary to prevent fermentation in a litre of sterilized beef-broth. His experiments show that the mercurials are the best antiseptics, the biniodide being nearly three times as strong as the bichloride. In his table of disinfectants he places the bichloride the fourth on the list. To a litre of sterilized beef-broth he found it required 0.005 gramme of the biniodide of mercury to keep the broth pure; while 0.070 gramme of the bichloride of mercury was necessary to produce like effects. This shows that bacterial life is impossible in a solution of one-forty-thousandth

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part of the biniodide, while of the bichloride it requires the one-fourteen-thousandth part. I was so forcibly impressed with his experiments that I determined to give the biniodide of mercury a trial in obstetric cases where it would be necessary to use an antiseptic. The following are the cases in which it was used:

Case I.—On February 7, 1885, I was requested to take charge of Mrs. D., who had been confined about six weeks previously. It had been her second confinement. The duration of labor had been short and delivery natural, but an extensive laceration of the perineum had occurred. The attempt had been made to bring the parts together by suture. On the third evening she was attacked with severe frontal headache and chills, followed by fever, with great tenderness over the region of the uterus. There being no improvement in her condition, her medical attendant was discharged, and another called in, who gave such an unfavorable prognosis that he also was requested to cease his attendance. I was finally called in on the above date. The patient had well-marked symptoms of septic poisoning; pulse 130 to 140, small and thready, and disappearing under pressure of the finger; temperature, 104° to 105°; slightly delirious; constant vomiting; abdomen swollen and excessively tender; uterus enlarged, extending fully three inches above the pubis. In the right side there seemed to be a growth extending up into the abdomen, tender on pressure. On making a vaginal examination, I found the os dilated so that my index-finger could readily enter the uterus. Its withdrawal was followed by a gush of highly offensive matter. The uterus was surrounded by organized lymph and was immovable. The mass on the right side was easily detected, and was continuous with the lymph surrounding the uterus. The vagina was hot. The perineum was torn to the anus; the surface raw, and secreting an acrid matter which scalded the surrounding parts. The urine was dark; on standing, a reddish material settled to the bottom; it looked like blood-corpuscles. Dr. A. E. Roussel examined the specimen and reported it to be slightly acid; no albumen nor sugar; microscopically he detected occasional pus-corpuscles, and numerous bacteria. In conjunction with internal treatment, intra-uterine injections were made three to four times a day. I first used a solution of bichloride of mercury one to two thousand. This was continued for three days without any marked results. The discharges continued as offensive. On the fourth day the bichloride was substituted by a one to four thousand solution of biniodide of mercury. Within twenty-four hours an amelioration of all symptoms took place; the pulse fell to 100; temperature, 101°; urine became clear, and the discharge odorless. The injections were continued for ten days, their frequency being gradually reduced. The uterus returned to almost its normal size, and the lymph was gradually absorbed. The patient recovered.

Case II.—March 19, 1885, I was called to attend Mrs. W. in her first confinement. On my arrival, found she had been in labor several hours. Examination showed the os perfectly dilated; bag of waters protruding, vertex presentation, first position, ruptured the amnion. The vagina near its outlet was roughened with venereal warts, which spread also over the vulva. Labor progressed rapidly, and the second stage was happily ended. After waiting nearly an hour making compression on the uterus, I made slight traction on the cord, and, while doing so, felt, with my hand upon the uterus, a cup-like depression of the fundus take place. This convinced me that I had an adherent placenta to deal with, and it would be folly to wait any longer. On introduction of the hand I found the placenta completely adherent,—one could hardly say which was uterus, which placenta. After considerable trouble, I at last succeeded in detaching the placenta: it took fully three-quarters of an hour. On making a second examination, my hand came in contact with long shreds hanging from all sides of the uterus: the more I scraped, the more there seemed to be. I gave the patient ʒii of the fluid extract of ergot. The patient did well for ten days, when towards evening she complained of a chill and severe frontal headache. I gave her quinina sulph., gr. x, with morph. sulph., gr. ¼, at one dose, and washed out the uterus with one to four thousand solution of biniodide of mercury. The pulse was 115, the temperature 102°. The discharge was highly offensive. The injections were repeated every four hours. On the evening of the next day the pulse was 98, the temperature 100°, discharge odorless, and the patient was perfectly well in ten days more.

Case III.—April 23, 1885, I was requested to call at once to see Mrs. K., who was reported in imminent danger of death. This was her ninth confinement. The history of the previous ones, with one exception, was not good. Her labors were natural, but were followed by terrible flooding and protracted convalescence. I found the patient in an attack of puerperal convulsions. I gave at once gr. xxx of potass. bromide and gr. xx of chloral hydrate. This dose was repeated in half an hour: ten minutes later another convulsion occurred. I then bled the patient freely. The os uteri was somewhat enlarged, the cervix soft and dilatable; vertex presentation. Dr. Curtin, whom I had sent for, having confirmed my opinion, and considering that the patient's time was quite up, we decided to etherize, dilate the cervix, and deliver. The forceps were applied, and traction made at intervals. A living child was safely delivered. Continuous pressure was maintained over the uterus, but after the expulsion of the placenta the uterus did not contract until it had been washed out

with hot water. The bromide and chloral was continued every two hours, and no more convulsions occurred. The patient did well up to the fourth day, when the discharges became very offensive, the pulse accelerated, and slight tenderness existed over the uterus. No chill nor fever. The uterus was thoroughly washed out with a solution of the one to four thousand biniodide of mercury. Within twenty-four hours the discharge became odorless, and the tenderness over the uterus had disappeared. The patient recovered after a tedious convalescence.

In these cases it will be seen that the biniodide was prompt in its action, markedly so in Case I., where the bichloride and the biniodide were both employed, the result being decidedly in favor of the biniodide. Naturally it will be said, here are only three cases from which deductions are to be drawn, and it is only after it has been carefully used in a large number of cases that its efficacy can be proved. It is for this reason that I call to it the attention of the members of this Society, who are in a position to give it a fair and impartial trial and at some future time may give the results of their investigations. I have found the one to four thousand solution of the biniodide non-irritating: I have used it extensively in my gynæcological practice, and in washing out pus-cavities, with good results. In it we have a preparation where the smallest amount of drug is used, with results far exceeding those of any other antiseptic. On account of the small quantity of mercury, there will be less risk of salivation.

The method I have pursued in making the solution is: Take one and three-fourths grains of the salt well triturated in a mortar and rubbed, with one quart of boiling water slowly added, giving a solution of one to four thousand three hundred and ninety.

Since writing the above, I have seen in the *Philadelphia Medical Times*, May 16, 1885, that Dr. Panas, eye-surgeon of the Hôtel-Dieu, uses the one to twenty-five thousand solution of biniodide of mercury in eye-cases. He makes the following statement: "After a number of experiments, I have convinced myself that a solution in water one to ten thousand of the bichloride or a similar solution one to twenty-five thousand of the biniodide of mercury is much superior to any other antiseptic solution employed in eye-surgery." Here again we have a statement that the biniodide in a smaller quantity is as good an antiseptic as the bichloride.

Dr. MONTGOMERY'S experience has led him to the conclusion that the bichloride of mercury is far more effective as a disinfectant than carbolic acid. Its introduction into the Philadelphia Hospital was due to Dr. Parvin, who found it very satisfactory. In eighteen cases of puerperal fever that were treated with bichloride injections, only three deaths occurred. This success was attributed by the hospital staff to the use of the bichloride. Dr. Montgomery in private practice follows the plan of Dr. Garrigues, of New York, of avoiding intra-uterine injections after labor, but applies pledgets wet with a bichloride solution over the vulva, after carefully cleansing away clots and washing the external parts with a similar solution. This sponging is repeated twice every day. In his last term at the Philadelphia Hospital he had only two cases of puerperal fever, one of which commenced twelve days after delivery. The history of Dr. Bernardy's cases shows an equal if not better antiseptic in the biniodide of mercury.

Dr. J. V. KELLY, some years ago, had several fatal cases of puerperal fever, and about twenty-five cases that got well. The trouble commenced in a case of abortion in which he did not succeed in removing all of the placenta. He was at the same time attending a bad case of erysipelas, and at that time the relationship of puerperal fever and erysipelas was not known to him. He was on the point of giving up his practice and leaving the town, and he consulted Dr. Goodell on that question. Dr. Goodell discountenanced such action, but advised him when attending an obstetric case to remove his coat and roll up his sleeves, and wash his hands and arms well with turpentine, using the nail-brush thoroughly. Since that time he washes his hands in turpentine every day, and again before every case of labor. He also uses a wash of vinegar or carbolic solution before touching a puerperal patient. He has had no puerperal fever or other septicæmic symptoms since that time.

Dr. PARVIN said, "As a reference has been made by Dr. Montgomery to my having used corrosive sublimate vaginal injections in the cases of puerperal septicæmia under my care in the Philadelphia Hospital in my term of service last year, I will refer to the antiseptic treatment in the cases occurring the present year. When I took charge of the obstetric ward on the 1st of January I found five recent cases of septicæmia: two of these patients died; one of the two had apparently recovered and then was attacked by pneumonia. Quite possibly this pneumonia had a septic origin. Then there were at least seven other cases; but all these, as well as three of the original five, recovered. Injections of a solution of corrosive sublimate, one to five thousand, were used in all cases immediately after labor. The external parts were washed, too, with a similar solution: this injection was repeated twice a day in all cases for the first week after labor, while it was used oftener in those having septicæmia. Intra-uterine injections were used only when vaginal injections failed to correct the offensiveness of the discharge; but, as is well known, there may be serious, even fatal, cases of septic disease though the lochial flow is not at all offensive.

"In private practice, after once washing out

the vagina thoroughly with the antiseptic solution immediately after labor, this need not be repeated unless symptoms demand it; but the bathing of the vulva twice a day with the solution ought not to be omitted. Add, if you please, to this treatment the use of antiseptic napkins, a practice pursued by Dr. Montgomery at the Philadelphia Hospital so successfully, and I think we have taken the most important means to guard against the entrance of septic germs after labor.

"I have had no experience with the biniodide of mercury, and do not know that it will supersede the bichloride. The argument in its favor is as strong as three successful cases can make it, but these are entirely too few, as Dr. Bernardy justly says, to prove its value and its superiority. In one of the doctor's cases labor was induced, apparently on account of eclampsia. Now, is this the best treatment? Obstetricians are by no means agreed; some of the best condemning such treatment. But the subject is not properly before us now, and therefore no further remarks will be made upon it."

Dr. MONTGOMERY uses the bichloride solution as an external wash only, not as an injection. He thinks the records of the hospitals in which injections are used will not show as good results as those in which they are omitted, if septicæmia be not present.

Dr. WILLARD had a warning to sound with regard to the use of bichloride solutions of stronger grades. He had been using washes and antiseptic dressings made with one to one thousand solution of bichloride, but, in consequence of what was written about the advantages of stronger solutions, he increased the strength of his dressings to one to five hundred, and within twenty-four hours the stools contained bloody mucus, and were small and griping; there was vesication about the wound and around the limb under the dressings. Entirely dry dressings had been used, but they had been moistened by pus and serum from the wound. He does not see the advantage of strong solutions in serum, as one to one hundred or seventy-five. The serum is a decomposable substance, and an uncertain portion of the antiseptic agent is destroyed by it: weak solutions in boiled water seem more reasonable and answer every purpose.

Dr. LONGAKER has been much interested in the third stage of labor, and would like to hear how Dr. Bernardy removed the placenta in the adherent case narrated by him. He has been using Crédé's method with great satisfaction. He thinks the hand should be kept out of the parturient canal as much as possible. The routine employment of vaginal injections after labor he did not consider necessary, and preferred depending upon outside washes. He finds that the temperature rarely rises during the puerperal period, even after instrumental delivery. He thinks care during the third stage will avoid the necessity for antiseptics.

Dr. PARISH agrees with Dr. Parvin's views. He has found a solution of one to one thousand of chloride irritating, and he now uses one to two thousand or five thousand. Strong solutions cause an appearance resembling erysipelas or inflammation of the derma. Injections are not necessary in every case. When the surroundings are cleanly and the patient a multipara, he does not use them; but in primiparæ with contusions or lacerations, and when version or instruments have been employed, he is in the habit of injecting a weak solution of bichloride immediately after delivery, and he does not repeat it, but simply washes out the vagina. Cleanliness of hands, instruments, and nurse is the most important point. He has never had any trouble in private practice.

Dr. BERNARDY, in closing the discussion, remarked that he thought he had a far better antiseptic in biniodide than the bichloride. He had used the former in surgical cases as well as in gynæcology, and always with good results. He does not use intra-uterine washes in every case of labor. He has attended since the first of the year about seventy cases of labor, and he has employed the intra-uterine injections in only the three cases detailed. In every case of labor he uses carbolic acid soap to cleanse his hands and arms and the external genitalia of the patient. The eclamptic patient had reached or passed her full term, and there was no reason why the child should not be removed. In the case of adherent placenta it was pulled off forcibly, and a shreddy lining was left in the uterus, as no line of separation had formed. He believes the dangers consequent on passing the hand and arm into the uterus and vagina are much exaggerated, and he does not hesitate to do so when the exigencies of the case demand it.

GESTATION IN A SARCOMATOUS UTERUS SIMULATING EXTRA-UTERINE PREGNANCY. BY DR. E. R. BERNARDY.

"October 3, 1884, I was requested to visit Mrs. McG., delicate, aged about 30, married six months. She was said to be suffering from a cold. I found the patient up; temperature 105°, pulse 130, with a high fever and a severe cough. Examination of the lungs revealed double pneumonia. At the same time noticing the abdomen prominent, I inquired, and was informed that pregnancy was five months advanced. The abdomen was rather large for that period. On Sunday, October 5, she complained of a sharp pain in the right inguinal region: the pain was excruciating, and demanded the administration of large doses of morphia before any relief was obtained. I found the right inguinal region filled by an immense growth, reaching almost to the lower border of the liver. The uterus,

or what appeared to be the uterus, was enlarged, and pushed well towards the left side. On vaginal examination, I found the right side of the pelvis filled by a growth. At first I thought I detected fluctuation, but closer examination showed it to be hard to the touch. The uterus was jammed well towards the left, and was immovable, the neck somewhat absorbed, the os tilted up behind the pubis. To reach it the finger had to be passed well upward: it was closed and soft. The patient had never had any uterine trouble. Menses always came without pain; they never appeared after her marriage, which occurred one week after a period. Her health remained good for three months after marriage, when, while out walking, she was suddenly seized with a sharp, lancinating pain in the right side of the abdomen. The pain was so great that she almost fainted, but, being a woman of strong will, she finally, after suffering terrible agony, reached home, and went to bed. No physician was called in. Next day there were slight stains of blood on her night-dress. Under absolute rest, the pain subsided, and at the end of a week she was about her household duties. The pain in the side returned if she overexerted herself. Sexual intercourse was painful, and was followed by traces of blood the next day. Believing that the symptoms pointed to either extra-uterine pregnancy or a tumor complicating pregnancy, I asked Dr. Goodell to meet me. By the time the consultation was held, October 8, a severe attack of peritonitis had commenced. This complicated matters, as a close examination was impossible. On account of the distended and painful condition of the abdomen, it was impossible to trace any outline of the growth or uterus. It was decided that the symptoms and history pointed to extra-uterine pregnancy, but that undoubtedly the uterus contained something, whether a tumor or a child, in the present condition of the patient, it was hard to decide: the leaning was towards a pregnant uterus. By October 16 the peritonitis was under control, the lungs no better.

"October 19, I was sent for, the messenger stating that there was a renewal of the peritonitis. I found the patient in active labor, the fœtus descending rapidly. In half an hour labor was completed. I readily detected the large growth filling the upper portion of the right side of the pelvis: the uterus was surrounded by a hard growth. The cervix was hard. From this time the lungs improved, but she remained extremely weak, and there was a constant dribbling of blood from the vagina. November 3, the growth was still present and the cervix hard, and I began to think of malignant disease in connection with the tumor. I had applied, night and morning, to the abdomen, ointments of mercury, belladonna, and iodine equal parts: this seemingly had the effect of causing the absorption of the large growth, but the mass surrounding the uterus remained the same. November 27, vomiting occurred, and was arrested with difficulty; a bloody discharge from the vagina and a constant sore feeling over the region of the uterus, which was still towards the left side. The patient's condition was not good: she was extremely weak; the slightest exertion would exhaust her and bring on bleeding from the uterus. December 26, I found her suffering from pleurisy, the left pleural cavity full of fluid. January 1, abdominal dropsy had set in. A consultation with Dr. Goodell was held. A positive diagnosis of malignant disease was made.

"*Prognosis.*—Death at any moment. She died suddenly the same evening, while talking to her husband.

"*Post-mortem Examination*, by Dr. E. A. Roussel, twenty-four hours after death.—Patient greatly emaciated. Thorax: a large amount of effusion completely filling up the left pleural cavity, while the cavity of the right side was partially filled; both lungs were compressed upward; no adhesions. On section, the lungs appeared mottled, and were hepatized in general appearance, but were otherwise healthy. Heart: on opening the pericardium a moderate amount of serous fluid vegetations was found on the mitral valve; weight, eleven ounces. Abdomen: entire cavity was greatly distended with a dark fluid full of broken-down lymph. The intestines were forced upward: there were slight evidences of beginning peritonitis. A portion of the ileum on the right side presented a black, unhealthy appearance, bordering on gangrene. The uterus was increased in size. The outer surface presented an irregular, mottled appearance; large veins covered its surface; at the fundus there appeared a spot about one inch in diameter, of a bluish tinge. On pressure by the finger the surface readily broke. Underneath was a cavity about the size of a large hickory-nut: it did not communicate with the interior of the uterus. On opening the uterus, its cavity was found to be almost obliterated: the tumor seemed to have entirely absorbed the true uterine tissue, with the exception of the neck. In the body of the tumor were observed small masses or growths varying in size up to that of an egg. The ovaries were small, and seemed to have participated in the general disease. Microscopic examination proved the tumor to be of the adeno-sarcomatous variety.

"At first I was convinced that I had a case of extra-uterine pregnancy; but the peculiar hardness of the tumor made me doubtful. Here was a patient who had never had any uterine ailment. She marries, becomes pregnant; at the end of the third month, without any premonition, while quietly walking, she is seized with pain of an excruciating nature in the right side, goes to bed and remains quiet; the next day blood flows from the vagina. She

remains comparatively well for two and a half months more, when she is again suddenly seized with pain in the same side, followed by peritonitis. A tumor is found in the affected side; the uterus is enlarged, but not sufficiently so for a five-and-a-half-months' pregnancy, the os giving no signs of that softening which should accompany pregnancy. Could we have a group of symptoms more allied to those of extra-uterine pregnancy?"

Dr. J. M. KEATING made some remarks on *Infant-Feeding*. He said, "At my request, Dr. Charles Potts has instituted a series of experiments which have a decided practical value, and we hope to present them to this Society at an early date; but I desire to place on record a statement of the results so far reached, which appear to be interesting and important. The question often arises, Is it of advantage, or not, for an infant to be partly nursed and partly bottle-fed? What action has milk upon starch, if any? To answer this, the following tests were made: (1) Sample of milk composed of the milk of several women. A quantitative estimation of the sugar in it by Fehling's method showed 6.84 per cent.; 10 c.c. of this milk were then taken and ½ gramme of powdered starch added, allowed to stand at a temperature of 99° for thirty minutes, after which 5 c.c. diluted with 45 c.c. of distilled water were tested, and showed 8.62 per cent. of sugar. The other 5 c.c., after standing sixty minutes, gave 9.09 per cent. (2) Another sample found to contain 7.14 per cent. of sugar had ½ gramme of powdered starch added as in No. 1. In thirty minutes it gave 9.80 per cent. of sugar in 5 c.c. The other 5 c.c., after remaining sixty minutes, gave 8.62 per cent. Possibly part of the sugar deposited and was drawn off with the first 5 c.c. (3) Another sample showed 6.32 per cent. of sugar, and after the starch was added, as before, gave in the first 5 c.c. 8.19 per cent., in the next 5 c.c. 7.93 per cent. These investigations showed that the women's milk gave an increase of sugar after digestion with starch.

"Experiment 4. A sample of cow's milk was tested and found to contain 3.87 per cent. of sugar: to this was added ½ gramme of starch to 10 c.c. At the end of thirty minutes 5 c.c. diluted with 45 c.c. of distilled water showed no increase of sugar. (5) A sample of cow's milk gave 4 per cent. of sugar, and was treated as before, but at the end of thirty minutes, and then sixty minutes, it gave the same result. (6) Another sample of cow's milk gave 3.703 per cent. of sugar; it was treated as before with same amount of starch. In thirty minutes 5 c.c. gave same result; in sixty minutes 5 c.c. gave same result. These investigations show that cow's milk gave no increase of sugar after adding starch. Does the acidity of cow's milk prevent the sugar-change? Does the sugar-change continue in an acid medium? (7) Took another sample of human milk from one woman. It yielded 6.25 per cent. of sugar; added starch as before. In thirty minutes 5 c.c. gave 7.14, and in sixty minutes 5 c.c. gave 7.6 per cent. Took 10 c.c. of this milk (6.25 per cent. sugar) and added a few drops of pure dilute hydrochloric acid, enough to acidulate it faintly, and then added ½ gramme of starch, and let it stand as before. In thirty minutes 5 c.c. gave 6.41 per cent., and in sixty minutes 5 c.c. gave 7.35 per cent. of sugar. (8) Another sample of woman's milk, without starch, gave 6.17 per cent.; with starch, 7.24 per cent.; 10 c.c. of the same acidulated with hydrochloric acid, (C. P.) diluted, gave in thirty minutes 7.35 per cent. In these tests 10 c.c. of Fehling's solution were used with 40 c.c. of distilled water.

"If future investigations prove the correctness of these statements, we may safely assert that the nursing woman may advantageously supplement her breast-milk with some well-prepared digestible form of food containing a small quantity of starch, and also that the amylolytic ferment will remain active in the slightly acid stomach of the infant."

W. H. H. GITHENS,
Secretary.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held September 9, 1885, the President, JOHN A. WYETH, M.D., in the chair.

HYDATIFORM MOLE.

Dr. H. J. BOLDT presented the specimen, which was chiefly of interest because of the condition of the patient at the time it was removed. She had been flowing profusely, and at the time he saw her the pulse was almost imperceptible. A vaginal tampon had proved of no avail. He at once dilated the cervix with a sponge tent and removed the hydatid mole, which was slightly adherent to the fundus and sides of the uterus. He thought the patient would have died within twenty-four hours if he had not adopted the measure of immediately dilating the cervical canal to discover and remove the cause of the hemorrhage.

OSTEITIS FOLLOWING VACCINATION.

Dr. W. P. WATSON presented a girl, aged 5 years, whose family history was good. She had been well until two years of age, when she was vaccinated. Three days afterwards she was obliged to go to bed. The mother noticed a swelling and redness at the point of inoculation, and also below on the forearm, which by the sixth day showed marked inflammation. A week later a swelling also appeared on the right arm, and, later, one on the scapula and one on the leg. Abscesses formed which discharged unhealthy pus for

about two years, and during the last year several spiculæ of bone were discharged from the sinus on the left forearm. At present the sinuses were all closed, but the left elbow was anchylosed. The question arose as to a possible causative relation of the vaccine inoculation to the osteitis which followed.

Dr. BOLDT asked whether any traumatism took place after the child was vaccinated, and mentioned a case in which multiple bone-abscesses followed vaccination. The mother first denied that the child had sustained any injury at the point of inoculation, but it was subsequently discovered that the child had received a slight injury during the mother's absence which gave rise to erysipelatous swelling.

Dr. HEINEMAN thought a latent strumous tendency may have existed which the vaccinia caused to be made manifest.

The PRESIDENT said that many cases of osteitis occur like the one presented, in which there had been no vaccination, and he therefore could not see why the two conditions may not have been a simple coincidence in this case.

Dr. W. M. CARPENTER remarked that, so far as his experience went, the local manifestations following the use of bovine virus were much more severe than those following the use of humanized virus.

Dr. MESSENGER and Dr. J. LEWIS SMITH thought that vaccinia may have called out a latent tendency, the same as occurred at times with scarlet fever, etc. Dr. Smith recalled the case of a child with marked strumous tendency dating back to vaccination. The vaccine inoculation had probably acted as the exciting cause.

IDIOPATHIC NEPHRITIS DURING THE EARLY MONTHS OF INFANCY.

Dr. J. LEWIS SMITH presented some specimens which were referred to the microscopical committee for further examination. The case was that of a wet-nursed baby, born January 28, 1885, an inmate of the New York Infant Asylum. It was seen but two or three times by Dr. Smith. On the 15th of July, when nearly six months old, the mother called attention to the fact that the child had not passed urine for some hours. Some sweet spirit of nitre restored the secretion. The urine was not examined. There had been no scarlet fever or diphtheria in the institution. Five days later the mother said the urine was again suppressed, but it was restored by the same remedy used as before. The child then did well until July 31, when diarrhœa occurred. This was so far checked within two days that not more than four passages occurred during the twenty-four hours. But the child remained unwell. August 2 it had convulsions, lasting not longer than five minutes. Following the convulsions there were marked nervous symptoms for about three days. Afterwards the child did not cease, during its waking hours, to roll its head. During the last two weeks of life it had occasional cough. The loss of flesh was slight. Death occurred on the 1st of September. During the last month the morning temperature had remained most of the time at about 100°; the evening temperature from two to three degrees higher. The highest temperature was 106°.

The autopsy was made by Dr. C. A. Dana. About an ounce and a half of serum, lying external to the brain, escaped on removing the calvaria. The brain had not yet been cut. The lungs showed marked hydrostatic congestion. The surface of the stomach was congested, showing evidences of gastritis. Although there had been diarrhœa for six weeks, the mucous membrane of the intestine was pale: there was no reference in the report to thickening of the membrane. The liver and spleen were congested. The lesions of principal interest were in the kidneys. These organs were enlarged; the right kidney showed the cortex thickened and pale, the pyramids congested, and there were hemorrhagic spots; the membrane lining the pelvis and calices was deeply congested. The left kidney was intensely congested, the pyramids and cortex being of one color. The bladder showed catarrhal inflammation. The urine contained mucus and a large amount of albumen; also of hyaline, granular, and epithelial casts. Dr. Dana had pronounced the cause of death to be acute nephritis. Dr. Smith thought that idiopathic nephritis occurred in young infants more frequently than is commonly supposed.

Dr. BOLDT said he had to-day made an autopsy on a child 13 months old, which gave a similar history, except as regarded the nervous symptoms, and he found signs of acute nephritis.

PERFORATING ULCER OF THE DUODENUM.

Dr. FRANK FERGUSON presented the duodenum removed from the body of a man 45 years of age, a tailor, who, when he entered the New York Hospital, was unable to give a satisfactory history in English. It was learned, however, that he had been sick with pain in the stomach and constipation for a month. He died two days after admission. Vomiting occurred several times. The abdomen was tender and retracted. There was an ulcer of the duodenum, the base of which was nearly an inch in diameter, circular, the other surface triangular; also evidence of peritonitis of perhaps two months' duration.

Dr. Ferguson had seen three cases of perforation of the duodenum, and in all the peritonitis was latent and not diagnosticated. Perhaps the withdrawal of some of the fluid within the peritoneal cavity would throw some light on the diagnosis.

CARDIAC DILATATION AND HYPERTROPHY; INTRA-VENTRICULAR OPENING; VEGETATIONS IN THE RIGHT AS WELL AS IN THE LEFT SIDE OF THE HEART.

Dr. FERGUSON also presented the heart removed from the body of a boy aged 13 years, who had certain pains suspected to be rheumatic, and who had also suffered from labored breathing and oppression in the chest. On admission to the hospital he was well nourished, but anæmic; slight general anasarca; the sternum and the jugular veins prominent; the cardiac area increased; the apex-beat could not be felt; there was a distinct epigastric beat; there was a loud blowing murmur in the seventh intercostal space, on the nipple-line, transmitted to the left, more marked on inspiration; in the second intercostal space, just to the right of the sternum, was a double systolic murmur, transmitted upward; the pulse regular and of fair force; inspiration everywhere jerky. During the first part of the boy's residence in the hospital he responded well to stimulants. At the end of ten days he was allowed to dress himself and sit in a chair. But he soon began to suffer from distressing dyspnœa and pain in the abdomen. He gradually failed; anasarca became more marked, the heart's action more rapid and feeble. He died the 5th of September; respiration 110, pulse from 120 to 140.

At the autopsy the heart was found to be the organ of chief interest. It was dilated, slightly hypertrophied; a large opening existed through the intra-ventricular septum. There were vegetations on the aortic valves, and also on the tricuspid and pulmonary valves. Dr. Ferguson thought the vegetations may have found their way from the left side of the heart through the intra-ventricular opening into the right side. At any rate, vegetations in the right side of the heart were very rare.

REVIEWS AND BOOK NOTICES.

MANUAL OF DISEASES OF THE EAR. By THOMAS BARR, M.D., Surgeon to Glasgow Hospital for Diseases of the Ear, etc., etc. Glasgow: James Maclehose & Sons, 1884. Pp. 530, 8vo.

The object of this Manual, as stated in the author's preface, is to present the main facts of aural surgery in a form sufficiently concise and methodical to meet the wants of general practitioners and students of medicine. This object has been successfully attained, in our opinion, and we have before us a readable and helpful work. There are one hundred and fifteen engravings, most of them well executed. On page 381, however, Fig. 101 is poorly executed and of no practical value, as it portrays a very unusual occurrence,—viz., the projection of an aural polypus into the concha. The treatment of aural polypus, and in fact of all forms of aural disease, is rational and in accordance with the most acceptable rules.

The author unfortunately follows the now antiquated classification of aural polypi of Steudener, instead of the later and accepted one of Moos and Steinbrügge, or the similar one given in Burnett's "Treatise on the Ear," second edition, which is based on the special studies of Seiss and Chrystie and is in harmony with the teachings of Formad. The true classification, named in order of frequency, is—1, Granulation-tumors; 2, Soft papillomata; 3, Fibromata; 4, Myxomata; and not, as once given by Steudener,—1, Mucous polypi; 2, Fibrous polypi; and 3, Gelatinous polypi, or myxomata. This latter classification is not accepted nowadays by aural histologists.

The anatomy of the ear has been the recipient of considerable attention, though, considering the prominence which should be given to this part of all books on otology which aim to guide in teaching, the anatomical figures are very few. But, as a rule, they are good and well chosen, as for example the figure in the Appendix, p. 492, illustrative of the tympanic plexus of nerves (after Hirschfeld and Leveillé). On the whole, Dr. Barr's Manual furnishes a very interesting and convenient guide in the study and practice of otology. B.

A PRACTICAL TREATISE ON DISEASE IN CHILDREN. By EUSTACE SMITH, M.D., F.R.C.P., etc. New York, William Wood & Co., 1884. Cloth, 8vo, pp. 844.

This is not a reprint of an English book, but a work written for publication in this country by an author already well known as a writer upon children's diseases, with a large experience to which a service at the London Children's Hospital has largely contributed. The fruit of twenty years' study and observation, the present volume possesses special claims for consideration. In it the author undertakes to discuss the whole subject of disease in early life, dealing with the matter purely from a clinical stand-point, omitting from consideration those disorders which, like diabetes, present exactly the same characters in the child that they do in the adult. In the matter of treatment, diet and hygiene are kept prominently in the foreground, and the principle enunciated everywhere that the details of nursing should always take precedence of drug-giving. In some parts the author may be considered too conservative, as in the remarks on operative interference in cases of intussusception. The identity of membranous croup and diphtheria is held by Dr. Smith, and a stimulating and supporting treatment is strongly advocated. There is a marked contrast between this work and some

of the other standard works on diseases of children in the matter of references to authorities: the present work being largely the outcome of the clinical experience of the author, references are rarely given, although familiarity with current literature is evident. The style is easy, interesting, and clear, and the pathological discussions are concise, the therapeutical recommendations judicious. On the whole, the work is a valuable addition to our literature of diseases of children, and deserves to be widely read.

INDEX-CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY. Authors and Subjects. Vol. VI. HEASTIE–INSFELDT. Washington, Government Printing-Office, 1885. Pp. 1051.

The sixth volume of this handsomely-printed catalogue completes the work to and beyond the ninth letter of the alphabet, and includes 7900 author-titles, representing 2543 volumes and 7250 pamphlets. It also includes 14,590 subject-titles of separate books and pamphlets, and 35,290 titles of articles in periodicals. The total number of book-titles contained in the six volumes which have appeared is 64,142, and of the journal articles, 219,154. In arrangement of matter and general appearance the volume corresponds with former issues of the series, which reflects honor upon American medicine.

HOLDEN'S ANATOMY.—A MANUAL OF DISSECTION OF THE HUMAN BODY. By LUTHER HOLDEN. Fifth Edition. Edited by JOHN LANGTON. With over Two Hundred Illustrations. Philadelphia, P. Blakiston, Son & Co., 1885. 8vo, cloth, pp. 886.

This practical anatomy is designed for study with the aid of dissection, beginning with the head and taking up *seriatim* the various organs and parts of the body. The descriptions are clear, the illustrations good, and the press-work and paper unexceptionable, as befits a work which has attained the dignity of a fifth edition. We notice short references to the functions of the spinal cord and to cardiac murmurs that are not strictly within the limits of a work on anatomy, but have failed to find a definition of the ciliary body.

GLEANINGS FROM EXCHANGES.

ARSENIC IN COMMERCIAL CHLORIDE OF LIME AND CHLORATE OF POTASH.—In a paper read before the Paris Pharmaceutical Society, M. L. Garnier recalled that some four years since he and M. Schlagdenhauffen had detected arsenic in certain commercial hypochlorites. The discovery was accidental, and occurred in investigating a fatal poisoning accident caused by chloride of lime. The chloride was found to contain arsenic, in proportion insufficient, however, to cause rapid death. This incident proved the importance, in medico-legal cases, of never adding any preservative or disinfecting agent to the organs or portions of organs set aside for chemical analysis.

Lately another observation has been made, equally interesting to the toxicologist,—namely, that chlorate of potassium of commerce is also apt to contain arsenic. In this case the contamination proceeds directly from that already indicated, since chlorate of potash in industry is usually manufactured from chloride of lime. The discovery was made in the following manner. In Fresenius and Babo's process for destroying organic matters, it will be remembered, chlorate of potassium is used as a preliminary step before other tests are applied. The stock of chlorate of potash in the laboratory having run out, a new lot was ordered; but before accepting the salt it was subjected to examination, and three different samples were found to be contaminated with arsenic. The proportion is very small, it is true, but yet sufficient to be clearly detected in twenty grammes of the salt decomposed with pure muriatic and sulphuric acids and introduced into Marsh's apparatus.

Although for many years every specimen of chlorate employed in the laboratory has thus been tested, it is the first time arsenic was ever detected in the chemical. Be the impurity due to the chloride of lime used in one manufacturing process, or to the chlorine gas run into the mixture of lime and potassium chloride according to another method, the fact remains that the chemist must always be on his guard. By the way, this is a curious peregrination of arsenic, much resembling the story of the house that Jack built. The chlorate of potash took the arsenic from the chloride of lime, which took it from the chlorine, which took it from the sulphuric acid, which took it from the natural pyrites containing arsenic.—*Druggists Circular*, September.

KERATIN-COATED PILLS.—Dr. Unna, of Hamburg, has discovered a coating for pills which is likely to prove even more useful than it is ingenious. The task which he set himself was to find a coating which would resist the solvent action of the gastric juice, but would dissolve in the small intestine. This he has succeeded in doing by the use of keratin, a substance extracted from the shavings of ox- or buffalo-horn. The shavings are first digested by artificial gastric juice (pepsin solution with one-per-cent. hydrochloric acid), and are then macerated for weeks in ammonia. When the ammonia is driven off, a gummy solution of keratin is left, from which, by drying, keratin is obtained in the form of shining, bright, yellow flakes.

A pill which is to be covered with keratin

requires to be prepared in a special manner. The medicine employed is first rubbed well up with cacao-butter or tallow, with the addition of some indifferent powder if necessary, and pills are made. The pills are then covered with cacao-butter, so as to prevent any of the medicine from being on the surface of the pill. When the pill is hard, it receives one or, better, two or three coatings of the solution of keratin. If the substance of which the pill is made renders solution in ammonia inconvenient, a solution in glacial acetic acid may be used. Keratin-coated pills are insoluble in the gastric juice, but dissolve as soon as they enter the small intestine, and have therefore a special value in cases in which medicines which have an irritating effect on the mucous membrane of the stomach are to be administered for any length of time,—for example, when arsenic, salicylic acid, creasote, copaiba, cubebs, tartar-emetic, and vermifuge medicines are prescribed.

The method is further useful when medicines are given which are affected by digestion in the stomach, forming insoluble precipitates with pepsin and peptones,—for example, tannin, alum, acetate of lead, subnitrate of bismuth, nitrate of silver, bichloride of mercury, etc.; and, further, in the case of medicines which it is desired should enter the intestine in as concentrated a form as possible, and medicines which are given with the view of affecting favorably diseased conditions of the mucous membrane of the stomach without exercising an irritating local action,—for example, iron, quinine, arsenic in catarrh of the stomach arising from ammonia.—*British Medical Journal.*

Microzymes of Jequirity. — Notwithstanding the excellent advocacy of the "nonbacillar nature of Abrus poison" by Drs. Warden and Waddell, the subject has not been settled. Sattler, it will be remembered, believed in the existence of a specific bacillus of jequirity. Cornil maintained that the subcutaneous injection of small doses of the poison conferred immunity from subsequent inoculations. This also was opposed by Drs. Warden and Waddell. MM. J. Bechamp and A. Dujardin have recently worked at the question. They find that the microzymes isolated from the seeds of jequirity possess active phlogogenic properties, as does the jequirity infusion itself. Further, these agents can fluidify starch, and they can develop into bacteria. Injected into the veins, they produce a disease and death altogether like that due to the jequirity infusion. These observers assert that the activity of a maceration of jequirity is not dependent on the presence of microbes from the air.—*Lancet.*

Intravenous Injection of Oxygenated Water condemned.—M. Laborde, at the Academy of Sciences, speaking upon the proposed use of oxygenated water as a germicide in infectious diseases by injecting it into the veins, stated that it is instantly decomposed when brought in contact with the fibrinous material of the blood, causing much frothing, and being liable to give rise to fatal embolism. This method of introducing oxygen is, therefore, to be condemned in practice.

MISCELLANY.

Meeting of Committee on Organization of the International Medical Congress.—A meeting was held September 3, in the city of New York, at which Dr. R. Beverley Cole presided, and Dr. J. V. Shoemaker acted as secretary.

The following "Rules" were unanimously adopted:

1. The Congress shall consist of members of the regular profession of medicine, and of such other scientific men as the Executive Committee of the Congress may see fit to admit, who shall have inscribed their names on the register and shall have taken out their tickets of admission.

2. The dues for members of the Congress shall be ten dollars each for members residing in the United States.

There shall be no dues for members residing in foreign countries.

Each member of the Congress shall be entitled to receive a copy of the "Transactions" for 1887.

3. The Congress shall be divided as follows, into seventeen Sections:

I. General Medicine; II. General Surgery; III. Military and Naval Surgery; IV. Obstetrics; V. Gynæcology; VI. Therapeutics and Materia Medica; VII. Anatomy; VIII. Physiology; IX. Pathology; X. Diseases of Children; XI. Ophthalmology; XII. Otology and Laryngology; XIII. Dermatology and Syphilis; XIV. Public and International Hygiene; XV. Collective Investigation, Nomenclature, Vital Statistics, and Climatology; XVI. Psychological Medicine and Diseases of the Nervous System; XVII. Dental and Oral Surgery.

4. The General Meetings of the Congress shall be for the transaction of business and for addresses and communications of general scientific interest.

5. Questions and topics that have been agreed upon for discussion in the Sections shall be introduced by members previously designated by the titular officers of each Section. Members who have been appointed to open discussions shall present in advance statements of the conclusions which they have formed as a basis for debate.

6. Brief abstracts of papers to be read in the Section shall be sent to the Secretaries of the proper Sections on or before April 30, 1887.

These abstracts shall be treated as confidential communications, and shall not be published before the meeting of the Congress.

Papers relating to topics not included in the lists of subjects proposed by the officers of Sections may be accepted after April 30, 1887: and any member wishing to introduce a topic not on the regular lists of subjects for discussion shall give notice of the same to the Secretary-General at least twenty-one days before the opening of the Congress, and such notices shall be promptly transmitted by the Secretary-General to the Presidents of the proper Sections. The titular officers of each Section shall decide as to the acceptance of such proposed communications and the time for their presentation.

7. All formal addresses, scientific communications and papers presented, and scientific discussions held at the General Meetings of the Congress, shall be promptly given in writing to the Secretary-General; and all papers presented and discussions held at the meetings of the Sections shall be promptly given in writing to the Secretaries of the proper Sections.

No communication shall be received which has already been published, or read before a society.

The Executive Committee, after the final adjournment of the Congress, shall direct the editing and the publication of its "Transactions," and shall have full power to publish the papers presented and the discussions held thereon, either in full, in part, or in abstract, as in the judgment of the Committee may be deemed best.

8. The official languages of the Congress shall be English, French, and German.

In the meetings of the Sections, no member shall be allowed to speak for more than ten minutes, with the exceptions of the readers of papers and those who introduce subjects for discussion, who may each occupy twenty minutes.

9. The rules and programmes shall be published in English, French, and German.

Each paper and address shall be printed in the "Transactions" in the language in which it was presented, and preliminary abstracts of papers and addresses also shall be printed each in the language in which it is to be delivered.

All discussions shall be printed in English.

10. The President of the Congress, the Secretary-General, the Treasurer, the Chairman of the Finance Committee, and the Presidents of the Sections, shall together constitute an Executive Committee of the Congress, which Committee shall direct the business of the Congress, shall authorize all expenditures for the immediate purposes of the Congress, shall supervise and audit the accounts of the Treasurer, and shall fill all vacancies in the offices of the Congress and of the Sections. This Committee shall have power to add to its membership, but the total number of members shall not exceed thirty. A number equal to one-third of the members of the Committee shall constitute a quorum for the transaction of business.

11. The Officers of the Congress shall be a President, Vice-Presidents, a Secretary-General, four Associate Secretaries, one of whom shall be the French Secretary and one of whom shall be the German Secretary, a Treasurer, and the Chairman of the Finance Committee.

12. The officers of each Section shall be a President, Vice-Presidents, Secretaries, and a Council.

13. The officers of the Congress and the officers of the Sections shall be nominated to the Congress at the opening of its first session.

14. The Executive Committee shall, at some convenient time before the meeting of the Congress, prepare a list of foreign Vice-Presidents of the Congress and foreign Vice-Presidents of the Sections, to be nominated to the Congress at the opening of its first session.

15. There shall be a standing Committee on Finance, composed of one representative from each State and Territory, the District of Columbia, the Medical Department of the Army, the Medical Department of the Navy, and the Marine Hospital Service.

The Chairman of the Finance Committee shall report to the Executive Committee of the Congress.

Each member of the Finance Committee shall appoint a local Finance Committee for his State, Territory, District, or Government Department, consisting of one or more members from each Government Department or Congressional District.

Each local Finance Committee shall report through its Chairman to the Chairman of the Finance Committee of the Congress.

It was also

"*Resolved*, That the representative or representatives in this Committee from each State, Territory, or Government Department shall organize the Financial Committees in their respective States, Territories, or Government Departments."

The following gentlemen were named as officers of the Congress:

President.—Austin Flint, M.D., LL.D., New York.

Vice-Presidents.—W. O. Baldwin, M.D., Alabama; H. I. Bowditch, M.D., Massachusetts; William Brodie, M.D., Michigan; Henry F. Campbell, M.D., Georgia; W. W. Dawson, M.D., Ohio; R. Palmer Howard, M.D., Canada; E. M. Moore, M.D., New York; Tobias G. Richardson, M.D., Louisiana; Lewis A. Sayre, M.D., New York; J. M. Toner, M.D., District of Columbia; the President of the American Medical Association; the Surgeon-General of the United States Army; the Surgeon-General of the United

States Navy; the Supervising Surgeon-General of the United States Marine Hospital Service.

Secretary-General.—Nathan S. Davis, M.D., LL.D., Illinois.

Treasurer.—E. S. F. Arnold, M.D., M.R.C.S., New York.

Chairman of the Finance Committee.—Frederick S. Dennis, M.D., M.R.C.S., New York.

Executive Committee of the Congress.—Austin Flint, M.D., LL.D., President of the Congress; Nathan S. Davis, M.D., LL.D., Secretary-General; E. S. F. Arnold, M.D., M.R.C.S., Treasurer; Frederick S. Dennis, M.D., M.R.C.S., Chairman of the Finance Committee.

Presidents of the Sections.—A. B. Arnold, M.D., General Medicine; William T. Briggs, M.D., General Surgery; Henry F. Smith, M.D., Military and Naval Surgery; DeLaskie Miller, M.D., Obstetrics; Robert Battey, M.D., Gynæcology; F. H. Tirrell, M.D., Therapeutics and Materia Medica; William H. Pancoast, M.D., Anatomy; John C. Dalton, M.D., Physiology; E. O. Shakespeare, M.D., Pathology; J. Lewis Smith, M.D., Diseases of Children; A. W. Calhoun, M.D., Ophthalmology; S. J. Jones, M.D., Otology and Laryngology; A. R. Robinson, M.D., Dermatology and Syphilis; Joseph Jones, M.D., Public and International Hygiene; Henry O. Marcy, M.D., Collective Investigation, Vital Statistics, and Climatology; John P. Gray, M.D., LL.D., Psychological Medicine; Jonathan Tafft, M.D., Dental and Oral Surgery.

Local Committee of Arrangements (with power to increase their number).—A. Y. P. Garnett, M.D., Chairman, District of Columbia; the Surgeon-General U. S. Army; the Surgeon-General U. S. Navy; the Supervising Surgeon-General U. S. Marine Hospital Service; J. H. Baxter, M.D., District of Columbia; C. H. A. Kleinschmidt, M.D., District of Columbia; N. S. Lincoln, M.D., District of Columbia; J. M. Toner, M.D., District of Columbia; and such additional members of the profession in the District of Columbia as the Executive Committee of the Congress may select.

Lists of Vice-Presidents, Secretaries, and Councilmen for each Section were named by the Committee of Arrangements, but as it was not practicable to ascertain at once who would accept the places assigned them, or who of those who had been announced in the medical press as declining to accept positions before the present rules and organization had been adopted, as given heretofore, might wish to withdraw such declination, the final adjustment of these offices was referred to the Executive Committee of the Congress, and all correspondence in relation thereto was transferred to the Secretary-General of the Congress.—*Journal of the American Medical Association.*

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 1, 1885, *TO SEPTEMBER* 12, 1885.

MAGRUDER, D. L., LIEUTENANT-COLONEL AND SURGEON.—Granted leave of absence for fifteen days. S. O. 201, A. G. O., September 3, 1885.

MCKEE, J. C., MAJOR AND SURGEON.—Sick-leave still further extended three months on surgeon's certificate of disability. S. O. 204, A. G. O., September 7, 1885.

MIDDLETON, PASSMORE, MAJOR AND SURGEON.—Assigned to duty as attending surgeon at these Headquarters, *vice* Major J. V. D. Middleton, surgeon, hereby relieved. S. O. 121, Department of the Missouri, August 28, 1885.

GIRARD, ALFRED C., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Boise Barracks, Idaho Territory. S. O. 142, Department of the Columbia, August 22, 1885.

PATZKI, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Jackson Barracks, New Orleans, Louisiana. S. O. 192, Department of the East, September 8, 1885.

DAVIS, WILLIAM B., CAPTAIN AND ASSISTANT-SURGEON.—Having reported for orders from leave of absence, assigned to duty at Fort Porter, New York, as post-surgeon. S. O. 183, Department of the East, August 28, 1885.

KANE, JOHN J., CAPTAIN AND ASSISTANT-SURGEON.—Upon expiration of his present leave of absence, to be relieved from duty at Willet's Point, New York Harbor, and to report to commanding general, Department of Texas, for assignment to duty. S. O. 201, A. G. O., September 3, 1885.

BANISTER, JNO. M., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to temporary duty at camp of competitors at Creedmoor, New York, arriving not later than September 4, 1885. S. O. 58, Division of the Atlantic, August 31, 1885.

RICHARD, CHARLES, CAPTAIN AND ASSISTANT-SURGEON.—To be relieved from duty in Department of the East and to report to the commanding officer, Willet's Point, New York, for duty at that station. S. O. 201, c. s., A. G. O.

POLHEMUS, A. S., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—When relieved at Fort McDermit, Nevada, assigned to temporary duty at Presidio of San Francisco, California. S. O. 87, c. s., Department of California.

KENDALL, WILLIAM P., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Relieved from duty at Presidio of San Francisco, California, and assigned to duty as post-surgeon at Fort McDermit, Nevada, relieving Assistant-Surgeon Polhemus. S. O. 87, Department of California, August 31, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM AUGUST 29, 1885, *TO SEPTEMBER* 5, 1885.

HENRY STEWART, SURGEON.—Leave of absence extended one year from October 15, with permission to remain abroad.

JOHN M. STEELE, PASSED ASSISTANT-SURGEON.—Detached, September 1, from "Constellation" and report for duty at Naval Academy, Annapolis, Maryland.

GEORGE A. BRIGHT, SURGEON.—Detached, September 1, from "Constellation" and wait orders.

S. H. DICKSON, PASSED ASSISTANT-SURGEON.—Ordered to Naval Academy, Annapolis, Maryland, as relief of Passed Assistant-Surgeon A. A. Austin.

HENRY B. FITTS, ASSISTANT-SURGEON.—Detached from Coast-Survey steamer "Gedney" and wait orders.

A. A. AUSTIN, PASSED ASSISTANT-SURGEON.—Detached from Naval Academy, Annapolis, Maryland, and ordered to Coast-Survey steamer "Gedney," to relieve Assistant-Surgeon H. B. Fitts.

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